Linear Waterbody Point Photographs Line 5 Wetland Delineation October 5, 2019, Page 1 of 2



Photograph 1: SASV020p, West, Upstream



Photograph 2: SASV020p, East, Downstream

Linear Waterbody Point Photographs Line 5 Wetland Delineation October 5, 2019, Page 2 of 2



Photograph 3: SASV020p, North, Across Stream

Linear Waterbody Data Sheet

Survey Description	n										
Project Name:		Waterbo	ody Nan	ne:			W	aterbody ID:			Date:
Line 5		Unname	d tributa	ry to Krause	Creek		SA	ASV024i			10/11/2019
State:	County:			Company:			Crew I	Member Initials	:	Photos:	
Wisconsin	Ashland		,	VHB			DCR, 0	CDC		3 (US, D	S, CS)
Tract Number(s):				Nearest Mile	post			Associated W	etland	ID(s):	
WI-AS-198.000			2	28.6				WASV076f			
Survey Type: (check one)	□ Се	enterline	⊠Re-R	oute	□Ac	cess Road		□Other:			
Physical Attribute	es										
Stream Classification: (check one)	□Ер	hemeral	⊠Intern	nittent	□P€	erennial					
Waterbody Type:											
	□River	⊠ Stream	□ Ditc	h 🗆 C	Canal	☐ Othe	er:				
OHWM		Indicator:		M 011	_					70	
Width: 5_ft.	(Crieck all	that apply)			ie	□Shelvin	g	□Wrested vegetation	L	Scouring	g □Water staining
Height: 1_ft. N/A□		⊠Bent, matted, vegetation	or missii	ng □Wra	ck line	□Litter and debris	nd	□ Abrupt plant community cha		∃Soil cha	racteristic change
Width of Waterbody - Bank to Top of Bank:		Width of Waterl		oe of Slope		of Waterb Edge:	ody - W	ater Edge to	Depth (Approx.	of Wate	r:
·		•			, valor	Lugo.			, ,,,	,	4.40 in
_ <u>5</u> ft.			<u>5</u> ft.		N/A□		<u>5</u> ft.		N/A□		<u>4-12 in</u> .
Sinuosity: (check one)		Water velocity: (Approx.)			Bank	height			Bank	slope	
□Straight		(прргох.)	O fno			Right:	<u>2</u> ft.			Right	: 90 degrees
∇Maanda ii		_	<u>0</u> fps			Left:				Lef	t:
⊠Meanderi	ng	N/A□					<u>2</u> ft.				90 degrees
Qualitative Attribu	ıtes										
Water Appearance: (check one)	□No water	⊠Clear	□Turbi	-	een ırface	□Su sc	rface cum	□Algal mats	□Othe	r:	
Substrate:	Bedrock	☐ Boulder ▷	☑ Cobble	e 🗵 Grav	el 🛭	☑ Sand [□ Silt/ c	lay □ Organi	с 🗆	Other:	
(check all that apply) % of Substrate:	%	%	<u>2</u> %	<u>10</u> %	· <u> </u>	<u>88</u> %	%	%		%	
Width of Riparian Zone	e: Veo	etative Layers:									
100ft.	(ched	ck all that apply) J. DBH of Domii		⊠ Trees	•		lings/Sh	nrubs:	⊠ Her		
N/A□	(appi		nants.	<u>20</u> in.		_	<u>2 in.</u>		<u>N/A</u> i	n.	
Dominant Bank Vegeta	ation (list):										
Carex crinita, Glyceria s	triata, Alnus	s incana									
Aquatic Habitats (ex: s	ubmerged or	emerged aquatic v	egetation	, overhanging	banks/ro	oots, leaf pac	ks, large	submerged wood	, riffles,	deep pool	s):
Pools											
Aquatic Organisms Ob	oserved (list	t):									
None											
T&E Species Observed	d (list):										
None											
Disturbances (ex: livest	ock access, n	nanure in waterboo	dy, waste	discharge pipe	es):						
None											
Waterbody is: (check one)	⊠ Na	atural	□ Arti	ficial, man-m	ade	☐ Manip	ulated				
Stream Quality ^a : (check one)	⊠ Hi	gh	□ Мос	derate		□ Low					

^a **High Quality:** Natural channel, natural vegetation extends at least one or two active channel widths on each side; banks stable and protected by roots; water color is clear to tea-colored; no barriers to fish movement; many fish cover types available; diverse and stable aquatic habitat; no disturbance by livestock or man.

Moderate Quality: Altered channel evidenced by rip-rap; natural vegetation extends 1/3-1/2 of the active channel width on each side; filtering function or riparian vegetation only moderately compromised; banks moderately unstable; water color is cloudy, submerged objects covered with greenish film; moderate odor; minor barriers to fish movement; fair aquatic habitat; minimum disturbance by livestock or man.

Low Quality: Channel is actively down cutting or widening; rip rap and channelization excessive; natural vegetation less than 1/3 of the active channel width on each side; lack of regeneration; filtering function severely compromised; banks unstable (eroding); water color is muddy and turbid; obvious pollutants (algal mats, surface scum, surface sheen); heavy odor; severe barriers to fish movement; little to no aquatic habitat; severe disturbance from livestock or man.

Notes:

SASV024i is an oxbow of Krause Creek (SASV019p); water is not flowing but is present throughout reach.

Waterbody Sketch (Include north arrow, centerline, distance from centerline, data point location, survey boundary, and IDs of associated features)



Linear Waterbody Point Photographs Line 5 Wetland Delineation October 11, 2019, Page 1 of 2



Photograph 1: SASV024i, West, Upstream



Photograph 2: SASV024i, East, Downstream

Linear Waterbody Point Photographs Line 5 Wetland Delineation October 11, 2019, Page 2 of 2



Photograph 3: SASV024i, North, Across Stream

Linear Waterbody Data Sheet

Survey Description	n										
Project Name:		Waterbo	dy Nam	ie:			W	/aterbody ID:			Date:
Line 5		Krause (Creek				S	ASV019p			10/4/2019
State:	County:			Company:			Crew I	Member Initials	: F	Photos:	
Wisconsin	Ashland			/HB			DCR, (CDC	(3 (US, D	S, CS)
Tract Number(s):				Nearest Mile	post			Associated W	etland	ID(s): W	/ASV059, WASV076f,
WI-AS-198.000			2	23.1				WASV077		`,	
Survey Type: (check one)	М С	enterline	□Re-Re	outo		cess Road		□Other:			
,		entenne	□ Ke-Ki	oute	□AC	cess Roau		□Otrier.			
Physical Attribute Stream Classification:											
(check one)	□ Ε	phemeral	□Intern	nittent	⊠Pe	erennial					
Waterbody Type: (check one)	⊠River	☐ Stream	□ Ditc	h □ C	Canal	☐ Othe	er:				
OHWM		Indicator:									
Width: 15_ft.	(check all	l that apply)			е	□Shelvin	g	□Wrested vegetation	\boxtimes	Scouring	g □Water staining
Height: 2 ft. N/A□		☐Bent, matted, vegetation	or missir	ng □Wrad	ck line	□Litter ar debris	nd	□ Abrupt plant community cha		Soil cha	racteristic change
Width of Waterbody -		Width of Waterl		oe of Slope			ody - W	ater Edge to	•	of Wate	r:
Bank to Top of Bank:		to Toe of Slope	:		Water	Edge:			(Approx.)		
<u>25</u> ft.			<u>15</u> ft.		N/A□	-	<u>15</u> ft.		N/A□		<u>2 ft</u> .
Sinuosity:		Water velocity:			Bank h	neight			Bank s	lope	
(check one) Straight		(Approx.)				Right:	0.11			Right	
		_	<u>2</u> fps	Left:			<u>6</u> ft.				<u>90</u> degrees t:
⊠Meanderi	ing	N/A□					<u>4</u> ft.				70 degrees
Qualitative Attribu	utes										
Water Appearance: (check one)	□No water	⊠Clear	□Turbio	d □Sh	oon	□Sur	face	□Algal I	□Other		
(chook cho)	-INO Water	⊠ Cleal	- Tuibit	-	ırface		um	mats		•	
	☑ Bedrock	⊠ Boulder ∑	Cobble	e ⊠ Grave	el 🗆	Sand	⊠ Silt/ c	clay 🗆 Organi	c 🗆 (Other:	
(check all that apply) % of Substrate:	<u>70</u> %	<u>5</u> %	<u>5</u> %	<u>10</u> %	· _	_%	<u>10</u> %	%		%	
Width of Riparian Zon		getative Layers:									
		eck all that apply)			:	⊠ Sapl	ings/Sh	nrubs:	⊠ Herb	os	
<u>>500ft.</u> N/A□		g. DBH of Domii	nants:	<u>4</u> in.			<u>1</u> in.		N/A_ir	١.	
Dominant Bank Veget		,									
Fraxinus pensylvanica,	Alnus incan	na, Betula allegha	aniensis								
Aquatic Habitats (ex: s	submerged or	emerged aquatic v	egetation	, overhanging	banks/ro	ots, leaf pac	ks, large	submerged wood	, riffles, o	deep pool	s):
leaf packs, large subme	erged wood,	, riffles, pools									
Aquatic Organisms Ol	oserved (lis	st):									
None											
T&E Species Observe	d (list):										
None											
Disturbances (ex: lives	tock access,	manure in waterboo	dy, waste	discharge pipe	es):						
Beaver dam blown out a	icross streai	m									
Waterbody is: (check one)	⊠ N	atural	☐ Artif	ficial, man-m	ade	☐ Manipu	ulated				
Stream Quality ^a : (check one)	⊠H	igh	□ Mod	derate		□ Low					

^a High Quality: Natural channel, natural vegetation extends at least one or two active channel widths on each side; banks stable and protected by roots; water color is clear to tea-colored; no barriers to fish movement; many fish cover types available; diverse and stable aquatic habitat; no disturbance by livestock or man.

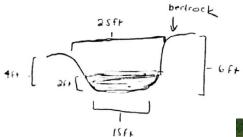
Moderate Quality: Altered channel evidenced by rip-rap; natural vegetation extends 1/3-1/2 of the active channel width on each side; filtering function or riparian vegetation only moderately compromised; banks moderately unstable; water color is cloudy, submerged objects covered with greenish film; moderate odor; minor barriers to fish movement; fair aquatic habitat; minimum disturbance by livestock or man.

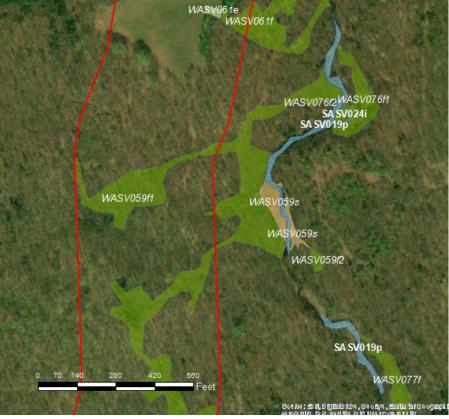
Low Quality: Channel is actively down cutting or widening; rip rap and channelization excessive; natural vegetation less than 1/3 of the active channel width on each side; lack of regeneration; filtering function severely compromised; banks unstable (eroding); water color is muddy and turbid; obvious pollutants (algal mats, surface scum, surface sheen); heavy odor; severe barriers to fish movement; little to no aquatic habitat; severe disturbance from livestock or man.

Notes:

SASV019p (Krause Creek) is primarily composed of bedrock and boulders; grade control present throughout, deep pools, submerged wood present. Beaver dam located on left bank where river crosses into study area on north end. WASV059, WASV076f, and WASV077 act in part as floodplains to stream.

Waterbody Sketch (Include north arrow, centerline, distance from centerline, data point location, survey boundary, and IDs of associated features)





Linear Waterbody Point Photographs Line 5 Wetland Delineation October 4, 2019, Page 1 of 2



Photograph 1: SASV019p, South, Upstream



Photograph 2: SASV019p, North, Downstream

Linear Waterbody Point Photographs Line 5 Wetland Delineation October 4, 2019, Page 2 of 2



Photograph 3: SASV019p, East, Across Stream

Linear Waterbody Data Sheet

Survey Description	1										
Project Name:		Waterbo	ody Nam	e:			W	laterbody ID:			Date:
Line 5 Relocation Project		Unname	ed tributa	ary to Kraus	se Cree	ek	sa	asw014			10/4/2019
State: WI	County:		C	Company:			Crew I	Member Initials	s: F	Photos:	
WI	Ashland		V	VEST			ES/WC		7	7824, 27	, 29
Tract Number(s):			N	learest Mile	post			Associated W	etland l	ID(s):	
WI-AS-200.000, WI-AS-4	00.800-00	00	2	3.6				wasw031f,	wasw0	30f	
Survey Type: (check one)	⊠ Ce	enterline	⊠Re-Ro	oute	□Ac	cess Road	l	□Other:			
,		Ontonino	<u> </u>			70000 11040					
Physical Attributes Stream Classification: (check one)		phemeral	⊠Interm	nittent	□Pe	erennial					
Waterbody Type: (check one)	River	⊠ Stream	☐ Ditch	n 🗆 (Canal	□ Oth	ər:				
OHWM Width:		Indicator: that apply)		☐ Clear lir	ne	⊠Shelvin	g	⊠Wrested vegetation		Scouring	g □Water staining
3.5 ft. Height: 0.5 ft.		⊠Bent, matted, vegetation	or missin		ck line	□Litter a	nd	□ Abrupt plant community cha		Soil cha	racteristic change
N/A□ Width of Waterbody - To	op of	Width of Water		oe of Slope		of Waterb	ody - W	·		of Water	:
Bank to Top of Bank: 5 ft.		to Toe of Slope			water	Edge:	2 #		(Арргох.)		0.5 ft.
			<u>8</u> ft.		N/A□		<u>3</u> ft.		N/A□		
Sinuosity: (check one)		Water velocity: (Approx.)			Bank I	height			Bank s	lope Right	_
Straight			0.2 fps			Right:	_1_ft.				: 80 degrees
⊠Meanderin	a	N/A□	<u> </u>			Left:	 1 ft.			Left	
		IVAL									ucgrees
Qualitative Attribut Water Appearance:	tes										
	No water	⊠Clear	□Turbio	_	een urface	□Su so	rface cum	□Algal mats	□Other:	:	
	Bedrock	□ Boulder □	Cobble	☐ Grav	el [☐ Sand	⊠ Silt/ c	clay 🗵 Organi	ic 🗆 (Other:	
(check all that apply) % of Substrate:	%	%	<u>25</u> %		_% _	%	<u>75</u> %	<u>15</u> %	_	%	
Width of Riparian Zone:		getative Layers:		Π-							
ft. N/A⊠	Avg	ck all that apply) g. DBH of Domi	nants:	⊠ Trees <u>10</u> in.	:		lings/Sh 2.5_in.	nrubs: _	☐ Herb	in.	
Dominant Bank Vegetat Betula alleghaniensis and Ostrya virginiana	tion (list):	lsamea on banks	s, Carex	bromoides, t	oanks a	ınd edge of	channe	el dominated by	tussock	s. Saplir	ngs <i>Alnus incana</i> ,
Aquatic Habitats (ex: sul	bmerged or	emerged aquatic v	egetation,	overhanging	banks/ro	oots, leaf pac	ks, large	submerged wood	l, riffles, c	leep pool:	s):
Tussock mounds, overha	anging <i>Car</i>	ex, leaf packs, ri	ffles and	runs, mostly	/ glides	present ra	ther tha	n deep pools			
Aquatic Organisms Obs	served (lis	t):									
T&E Species Observed	(list):										
Disturbances (ex: livesto	ck access, r	manure in waterboo	dy, waste	discharge pipe	es):						
none											
Waterbody is: (check one)	⊠ Na	atural	☐ Artif	icial, man-m	ade	☐ Manip	ulated				
Stream Quality ^a : (check one)	⊠ Hi	igh	□ Mod	lerate		□ Low					

а	High Quality: Natural channel, natural vegetation extends at least one or two active channel widths on each side; banks stable and protected by roots; water color is clear to tea-colored; no barriers to fish movement; many fish cover types available; diverse and stable aquatic habitat; no disturbance by livestock or man.
	Moderate Quality: Altered channel evidenced by rip-rap; natural vegetation extends 1/3-1/2 of the active channel width on each side; filtering function or riparian vegetation only moderately compromised; banks moderately unstable; water color is cloudy, submerged objects covered with greenish film; moderate odor; minor barriers to fish movement; fair aquatic habitat; minimum disturbance by livestock or man.
	Low Quality: Channel is actively down cutting or widening; rip rap and channelization excessive; natural vegetation less than 1/3 of the active channel width on each side; lack of regeneration; filtering function severely compromised; banks unstable (eroding); water color is muddy and turbid; obvious pollutants (algal mats, surface scum, surface sheen); heavy odor; severe barriers to fish movement; little to no aquatic habitat; severe disturbance from livestock or man.
ı	Notes:
	ream substrate varies from large rock/cobble and boulder upstream to leaf litter, silt and smaller cobble downstream. ream becomes tussock wetland wasw031f upstream and on top of ridge.
١	Naterbody Sketch (Include north arrow, centerline, distance from centerline, data point location, survey boundary, and IDs of associated features)

Waterbody ID: sasw014

sasw014









Linear Waterbody Data Sheet

Survey Description						
Project Name:	Waterb	ody Name:		Waterbody ID:		Date:
Line 5 Relocation Project	Unname	ed tributary to Krause	Creek	sasw013		10/3/2019
State: C	County:	Company:		Crew Member Initials	: Photos:	
WI	shland	WEST		ES/WC	7805, 78	807, 7811, 7816
Tract Number(s):		Nearest Milep	ost	Associated W	etland ID(s):	
WI-AS-400-008.000		23.7		wasw030f,	wasw032ss	
Survey Type:						
(check one)	□ Centerline	⊠Re-Route	□Access Road	□Other:		
Physical Attributes						
Stream Classification: (check one)	☐ Ephemeral	⊠Intermittent	□Perennial			
Waterbody Type:						
	River 🛭 Stream	☐ Ditch ☐ Ca	anal 🗆 Othe	er:		
OHWM Width:	OHWM Indicator: (check all that apply)	☐ Clear line	s ⊠Shelving	a ⊠Wrested	□Scourin	a □Water
ft.	(5.55.5. 2 5.2. 5.2. 5.7.)	on bank		vegetation	_ Scoulin	staining
Height:	☐Bent, matted,	or missing □Wracl	k line ⊠Litter ar	nd □Abrupt plant	□Soil cha	aracteristic change
ft. N/A□	vegetation	-	debris	community cha	nge	•
Width of Waterbody - To		body - Toe of Slope		ody - Water Edge to	Depth of Wate	r:
Bank to Top of Bank:	to Toe of Slope	:	Nater Edge:		(Approx.)	
<u> </u>		<u>6</u> ft.		<u>3</u> ft.	N/A□	<u>0.5</u> ft.
Sinuosity:	Water velocity:		va⊔ Bank height		Bank slope	
(check one)	(Approx.)		Right:		Righ	t:
		<u>0.6</u> fps	Left:	ft.	Lef	80 degrees
⊠Meandering	N/A□			<u>1</u> ft.		
Qualitative Attribute	es	·				
Water Appearance:						
(check one)	lo water ⊠Clear	☐Turbid ☐She on sur		face □Algal um mats	□Other:	
Substrate:	Bedrock ☐ Boulder □	☑ Cobble ☐ Grave	I ⊠ Sand □	☑ Silt/ clay □ Organi	c	
(check all that apply) % of Substrate:				, ,		
% of Substrate.	%%	15%	% <u>65</u> %	<u>25</u> %%	%%	
Width of Riparian Zone:	Vegetative Layers: (check all that apply)	□ Trees:		in and /Chrushas	⊠ I la rha	
ft.	Avg. DBH of Domi	nants: 15 in.	⊔ 5арі	ings/Shrubs: 3 in		
N/A 🗵	(approx.)				_""	
Dominant Bank Vegetati	on (IIST):					
Carex pedunculata						
Aquatic Habitats (ex: sub					, riffles, deep poo	ls):
Leaf packs, riffles present	, leaf litter and woody deb	ris, overhanging cepito	ose <i>Carex</i> species	S		
Aquatic Organisms Obse	erved (list):					
None observed						
T&E Species Observed ((list):					
Disturbances (ex: livestoc	k access, manure in waterho	dv. waste discharge nines	:)•			
Upstream livestock, pastur						
Waterbody is:	, ,					
(check one)	Natural	☐ Artificial, man-ma	de 🗆 Manipu	ulated		
Stream Quality ^a : (check one)	⊠ High	☐ Moderate	□Low			

а	High Quality: Natural channel, natural vegetation extends at least one or two active channel widths on each side; banks stable and protected by roots; water color is clear to tea-colored; no barriers to fish movement; many fish cover types available; diverse and stable aquatic habitat; no disturbance by livestock or man.
	Moderate Quality: Altered channel evidenced by rip-rap; natural vegetation extends 1/3-1/2 of the active channel width on each side; filtering function or riparian vegetation only moderately compromised; banks moderately unstable; water color is cloudy, submerged objects covered with greenish film; moderate odor; minor barriers to fish movement; fair aquatic habitat; minimum disturbance by livestock or man.
	Low Quality: Channel is actively down cutting or widening; rip rap and channelization excessive; natural vegetation less than 1/3 of the active channel width on each side; lack of regeneration; filtering function severely compromised; banks unstable (eroding); water color is muddy and turbid; obvious pollutants (algal mats, surface scum, surface sheen); heavy odor; severe barriers to fish movement; little to no aquatic habitat; severe disturbance from livestock or man.
ı	Notes:
	ream substrate varies from large rock and boulder upstream in west portion of parcel, to leaf litter, silt and smaller cobble wnstream
١	Naterbody Sketch (Include north arrow, centerline, distance from centerline, data point location, survey boundary, and IDs of associated features)

Waterbody ID: sasw013

sasw013





sasw013





Waterbody Data 3	HICCL									
Description										
Project Name:						Date:			Waterbody S	urvey ID:
Line 5 Relocation Project						2019-10-15			sasc043i	
State:	(County/P	Parish:			USGS Water	body Name	:		
WI		Ashland				UNT to Krau	se Creek			
Company:		Crew Me	mber Init	ials:		Latitude:			Longitude:	
Enbridge		BRG/JSV	N			46.343554			-90.675695	
Survey Type:	Centerli	ne [□ Re-Rou	ıte		Access Road	□Facility	□Other		
Waterbody Type:	River	[✓ Stream	l		Ditch	☐ Swale	☐ Canal		Other
Water Appearance: (check one)	No Wate	er [✓ Clear		□1	Turbid	☐Sheen or Surface	n □Surfac	e Scum 🗆 🗅 A	lgal Mats □Other
Existing Condition ^a :	Highly F	unctiona	al Stream	☐ Mode	erately	y Functional S		☐ Functionally	Impaired Strea	am
Feature Description: 🗹 l	Natural	[☐ Artificia	I, man-made	· 🗆	Manipulated				
Flow Regime:	Epheme	eral [✓ Intermi	ttent		Perennial	☐ Connec Swale	ting		
Sinuosity within Survey Corridor: (check one)	Straight	[✓ Meand	ering						
The feature is a long inter surrounding wetland featu					strate.	. Banks are de	ensely vegeta	ated, and the fe	ature is assoc	ciated with (and fed by) a
Measurements										
Depth of Water: 0.4 ft.	. 1	V/A□	Unknow	/n□ Water	Edge	e to Water Ed	ge: <u>3</u> ft.	N/A□	OHWM Width	n: <u>3</u> ft.
OHWM Indicator: (check all that apply)	□ Cle	ear line o	n bank	□Shelving		□Wrested ve	getation	☑ Scouring		☐Water staining
(опоок ин ини арруу)		nt, matted		□Wrack lin	ne	□Litter and o	lebris	□ Abrupt plan change	t community	☐Soil characteristic change
Dominant Substrate: (check all that apply)	□ Be	drock	□ Воι	ılder 🗹	Cobb	ole 🗆 G	ravel	□ Sand	☑ Silt/ clay	□ Organic
Observations										
Riparian Zone Present: (check one)	☑ Ye	S	□ N	10						
Vegetation Layers: (check all that apply)	☑ Tre	ees	Ø 9	Saplings/Shru	ıbs	☑ Herbs				
Dominant Bank Vegetati Populus tremuloides, Ace lateriflorum, Alnus incana.	r rubrun	: n, Fraxini	us pennsy	/Ivanica, Fra	xinus ı	nigra, Abies b	alsamea, Ca	rex pensylvanio	ca, Pyrola ellip	ica, Symphyotrichum
Aquatic Habitats (ex: subm Pools.		emerged aqu	uatic vegetati	on, overhanging	banks/re	oots, leaf packs, la	rge submerged v	wood, riffles, deep po	ools, etc.):	
Aquatic Organisms Observance.	erved (/	list):								
Disturbances (ex: livestock Runoff from nearby grave	k access I road, o	, manure i culverts, r	n waterbod nearby res	ly, waste disch sidential land	arge pi I use.	ipes):				
Observation Notes: The feature meanders and	d has a	wetland	fringe. A r	ain event wa	IS OCCI	urring at the ti	me of survey	<i>'</i> .		



sasc043i_N (downstream)



sasc043i_S (upstream)



sasc043i_W (across)

APPENDIX F

Waterbody Data Sheets
Part 14 of 24

Waterbody Date	a Silect										
Description											
Project Name:						Date:			Waterbody	/ Survey ID:	
Line 5 Relocation Proj	ect					2019-09-20			sasa040p		
State:		County/	Parish:			USGS Wate	erbody Name	9:			
WI		Ashland				Krause Cre	ek				
Company:		Crew Me	ember Ini	tials:		Latitude:			Longitude:		
Enbridge		NTT/DG	SL			46.341805			-90.681892		
Survey Type: (check one)	✓ Centerl	ine	☐ Re-Ro	ute		Access Road	□Facility	□Other			
Waterbody Type: (check one)	□ River		☑ Strean	n		Ditch	☐ Swale	☐ Cana	I C	Other	
Water Appearance: (check one)	☐ No Wa	ter	☑ Clear			Turbid	□Sheen o	n □Surfac	e Scum 🗆	□Algal Mats	□Other
Existing Condition ^a : (check one)	✓ Highly	Function	al Stream		Moderate	ly Functional		☐ Functionally	Impaired Str	ream	
Feature Description: (check one)	✓ Natural		☐ Artificia	al, man-	made 🗆	Manipulated					
Flow Regime: (check one)	☐ Ephem	eral	☐ Interm	ittent	V	Perennial	☐ Connec	cting			
Sinuosity within Survey Corridor: (check one)	□ Straigh	nt	✓ Mean	dering							
Perennial stream with	J		· ·		,						
Measurements											
Depth of Water: 0.5	ft.	N/A□	Unknov	wn□ \	Nater Edg	e to Water Ed	dge : <u>9</u> ft	. N/A 🗆	OHWM Wid	dth: <u>10</u> ft.	
OLDA/BA localita at a m		C			. tt		4 - 4!				4 - t - t
OHWM Indicator: (check all that apply)	□ C	ear line o	on bank	□She	elving	□Wrested \	egetation/	□Scouring		□Water s	taining
		ent, matte ing veget		□Wra	ack line	☑ Litter and	debris		t community	y □Soil cha change	racteristic
Dominant Substrate: (check all that apply)	□Ве	edrock	□ Во	ulder	□ Cobb	ole 🗹	Gravel	☑ Sand	☐ Silt/ cla	ay 🗆 C	Organic
Observations											
Riparian Zone Preser	nt: 🗹 Ye	es		No							
Vegetation Layers: (check all that apply)	☑ Tr	ees		Saplings	s/Shrubs	✓ Herbs	3				
Dominant Bank Vege Ulmus americana, Ca	tation (list): na, Pteri	dium aqui	llinum, <i>A</i>	Acer rubrur	n.					
Aquatic Habitats (ex: Pools, overhanging ro	submerged or ots.	emerged ac	quatic vegeta	tion, overh	anging banks/	roots, leaf packs,	large submerged	wood, riffles, deep p	ools, etc.):		
Aquatic Organisms (None.	Observed ((list):									
Disturbances (ex: live None.	stock acces	s, manure	in waterboo	dy, waste	discharge p	oipes):					
Observation Notes: None.											



sasa040p_E (across)



sasa040p_N (upstream)



sasa040p_S (downstream)

Waterbody Date	a Sileet											
Description												
Project Name:						Date:			Waterbody	Survey ID:		
Line 5 Relocation Pro	ject					2019-09-20			sasa044i			
State:		County/l	Parish:			USGS Water	body Name	<u> </u>				
WI		Ashland				UNT to Krau	se Creek					
Company:		Crew Me	ember Init	ials:		Latitude:			Longitude:			
Enbridge		NTT/DG	L			46.341676			-90.684365			
Survey Type: (check one)	✓ Centerl	ine	☐ Re-Ro	ute		Access Road	□Facility	□Other				
Waterbody Type:	☐ River		✓ Stream	า		Ditch	☐ Swale	☐ Canal		Other		
Water Appearance: (check one)	✓ No War	ter	□ Clear		□Т	urbid	☐Sheen on Surface	□Surfac	e Scum 🔲	Algal Mats	□Other	
Existing Condition ^a : (check one)	☐ Highly	Function	al Stream	V	Moderately	Functional S		☐ Functionally	Impaired Stre	eam		
Feature Description: (check one)	✓ Natural		☐ Artificia	al, man-m	nade 🗆 I	Manipulated						
Flow Regime: (check one)	☐ Ephem	eral	✓ Intermi	ittent		Perennial	☐ Connection Connection	ting				
Sinuosity within Survey Corridor: (check one)	□ Straigh	t	 Meand	lering								
Intermittent stream th	at meande	rs down a	a hillside a	nd conne	ects to a m	apped perenr	nial creek (sa	sa040p). Featu	re flows thro	ugh wetland	wasa087f.	
Measurements												
Depth of Water:	ft.	N/A 🗹	Unknov	vn□ W	ater Edge	to Water Ed	ge: ft.	N/A 🗹	OHWM Wid	th: <u>6</u> ft	·	
	 ;									·		
OHWM Indicator: (check all that apply)	□ Cl	ear line o	n bank	☑Shelv	ving	□Wrested ve	egetation	□Scouring		⊻ Water s	taining	
		nt, matte		□Wrac	ck line	☑ Litter and o	lebris	✓ Abrupt plan change	t community	□Soil cha change	aracteristic	
Dominant Substrate: (check all that apply)	□Ве	edrock	🗹 Воі	ulder	☑ Cobb	le 🗆 G	iravel	□ Sand	坚 Silt/ cla	у 🗆 С	Organic	
Observations												
Riparian Zone Prese	nt: 🗹 Ye	es	□ 1	No								
Vegetation Layers: (check all that apply)	☑ Tr	ees		Saplings/	Shrubs	✓ Herbs						
Dominant Bank Vege Betula alleghaniensis	etation <i>(list</i> , Equisetur): n sylvatic	um, Matte	euccia stru	uthiopteris	, Carex crinita	l.					
Aquatic Habitats (ex: Pools of water throug	submerged or hout.	emerged aq	uatic vegetat	tion, overhar	nging banks/ro	oots, leaf packs, la	rge submerged w	vood, riffles, deep po	ools, etc.):			
Aquatic Organisms (Frogs.	Observed ((list):										
Disturbances (ex: live None.	stock acces	s, manure	in waterboo	dy, waste d	discharge pi	pes):						
Observation Notes: No water currently pre	esent. Larg	e moss-c	overed bo	oulders pr	resent thro	oughout.						



sasa044i_E (downstream)



sasa044i_N (across)



sasa044i_W (upstream)

Waterbody Data	Officet									
Description										
Project Name:						Date:			Waterbody S	Survey ID:
Line 5 Relocation Projection	ct					2019-09-21			sasa045e	
State:		County/l	Parish:			USGS Wate	body Name	:		
WI		Ashland				UNT to Krau	se Creek			
Company:		Crew Me	ember Init	tials:		Latitude:			Longitude:	
Enbridge		NTT/DG	L			46.340924			-90.681726	
Survey Type: (check one)	Z Centerl	ine	☐ Re-Ro	ute		Access Road	□Facility	□Other		
Waterbody Type: [River		✓ Stream	า		Ditch	☐ Swale	☐ Canal		Other
Water Appearance: (check one)	☑ No Wat	ter	☐ Clear		ПΤ	Turbid	☐Sheen on Surface	n □Surfac	e Scum 🗆 🛭	Algal Mats □Other
Existing Condition ^a : [☐ Highly	Function	al Stream	□Мо	oderately	/ Functional S		Functionally	Impaired Stre	am
Feature Description: (check one)	☑ Natural		☐ Artificia	al, man-ma	de 🗆 I	Manipulated				
Flow Regime: (check one)	Z Ephem	eral	☐ Interm	ittent		Perennial	☐ Connection Connection	ting		
Sinuosity within Survey Corridor: (check one)	∃ Straigh	t	✓ Meano	dering						
Ephemeral drainage that	. modilo	oro domi	a stoop i				ougout.			
Measurements										
	ft.	N/A 	Unknov	wn□ Wat	er Edge	to Water Ed	ge: ft.	N/A 🗹	OHWM Widt	h: <u>2</u> ft.
OHWM Indicator: (check all that apply)	□ CI	ear line c	on bank	□Shelvir	ng	☑ Wrested ve	egetation	□Scouring		□Water staining
(опоск ин тистарруу)		nt, matte ng veget		□Wrack	line	☑ Litter and o	lebris	☑ Abrupt plan change	t community	☐Soil characteristic change
Dominant Substrate: (check all that apply)	□ Ве	edrock	☑ Bo	ulder	☐ Cobbl	le 🗆 G	iravel	□ Sand	坚 Silt/ clay	y 🗆 Organic
Observations										
Riparian Zone Present	□ Ye	es	1	No						
Vegetation Layers: (check all that apply)	☑ Tr	ees		Saplings/Sh	nrubs	✓ Herbs				
Dominant Bank Vegeta Pteridium aquilinum, Ab	ation (list pies balsa): imea, Po	pulus tren	nuloides.						
Aquatic Habitats (ex: su No water present throug	bmerged or ghout the	emerged aq drainage	quatic vegetal	tion, overhangi	ng banks/ro	oots, leaf packs, la	rge submerged w	vood, riffles, deep po	ools, etc.):	
Aquatic Organisms Ob None.	served ((list):								
Disturbances (ex: livestended) None.	ock access	s, manure	in waterboo	dy, waste dis	charge pi	pes):				
Observation Notes: None.										



sasa045e_N (downstream)



sasa045e_S (upstream)



sasa045e_W (across)

Waterbody Data	Officet										
Description											
Project Name:						Date:			Waterbody S	Survey ID:	
Line 5 Relocation Proje	ect					2019-09-20			sasa043i		
State:		County/l	Parish:			USGS Water	body Name	:			
WI		Ashland				UNT to Krau	se Creek				
Company:		Crew Me	ember Init	ials:		Latitude:			Longitude:		
Enbridge		NTT/DG	iL			46.339648			-90.684164		
Survey Type: (check one)	✓ Centerl	ine	☐ Re-Ro	ute		Access Road	□Facility	□Other			
Waterbody Type:	River		✓ Stream	1		Ditch	☐ Swale	☐ Canal		Other	
Water Appearance: (check one)	□ No Wa	ter	☑ Clear		□Т	urbid	☐Sheen or Surface	□Surfac	e Scum □A	Algal Mats □Other	
Existing Condition ^a : (check one)	✓ Highly	Function	al Stream	□ Mo	oderately	/ Functional S		☐ Functionally	Impaired Stre	am	
Feature Description: (check one)	✓ Natural		☐ Artificia	al, man-ma	ide 🗆 I	Manipulated					
Flow Regime: (check one)	□ Ephem	eral	✓ Interm	ittent		Perennial	☐ Connec Swale	ting			
Sinuosity within Survey Corridor: (check one)	□ Straigh	t	✓ Meano	lering							
Description Notes: The waterbody is a inte the channel with deep			hat runs de	ownhill and	d connec	ts to a mappe	d perennial s	stream (sasa04	0p). Moss-cov	vered boulders throughout	
Measurements											
Depth of Water: 1	_ ft.	N/A□	Unknov	vn□ Wa	ter Edge	to Water Ed	ge: <u>6</u> ft.	N/A□	OHWM Widt	h: <u>6</u> ft.	
OHWM Indicator: (check all that apply)	□ CI	ear line o	on bank	Shelvi	ng	□Wrested ve	egetation	□Scouring		☑ Water staining	
(спеск ан шагарру)		nt, matte ing veget		□Wrack	line	☑ Litter and o	lebris	☑ Abrupt plan change	t community	□Soil characteristic change	
Dominant Substrate: (check all that apply)	□Ве	edrock	☑ Bo	ulder	☐ Cobb	le 🗹 G	iravel	☐ Sand	I Silt/ clay	/ □ Organic	
Observations											
Riparian Zone Present (check one)	t: 🗆 Ye	es	<u> </u>	No							
Vegetation Layers: (check all that apply)	☑ Tr	ees		Saplings/S	hrubs	☑ Herbs					
Dominant Bank Veget Abies balsamea, Dryop	ation (list oteris inter	h): media.									
Aquatic Habitats (ex: se Pools of water.	ubmerged or	emerged ac	quatic vegetal	tion, overhang	ing banks/ro	oots, leaf packs, la	rge submerged v	vood, riffles, deep po	ools, etc.):		
Aquatic Organisms O Frogs present.	bserved ((list):									
Disturbances (ex: lives Debris and fallen tree I			in waterboo	dy, waste dis	scharge pi	pes):					
Observation Notes: Water currently flowing	through o	channel.	Seems to	flow consis	stently th	roughout mos	it of the year	-			



sasa043i_NE (downstream)



sasa043i_S (across)



sasa043i_SW (upstream)

Waterbody Date	a Silect											
Description												
Project Name:						Date:			Waterbody	Survey ID:		
Line 5 Relocation Pro	ject					2019-09-07			sasb005e			
State:		County/F	Parish:			USGS Water	body Name	:				
WI		Ashland				UNT to Bad	River					
Company:		Crew Me	ember Init	ials:		Latitude:			Longitude:			
Enbridge		MAL/SAI	M			46.341349			-90.673968			
Survey Type: (check one)	☑ Centerl	ine	☐ Re-Rou	ıte		Access Road	□Facility	□Other				
Waterbody Type:	☐ River		☐ Stream	ı	Ø	Ditch	☐ Swale	☐ Canal		Other		
Water Appearance:	✓ No War	ter	☐ Clear		□Т	urbid	☐Sheen or Surface	n □Surfac	e Scum 🗆]Algal Mats □O	ther	
Existing Condition ^a :	☐ Highly	Function	al Stream	□ Мо	derately	/ Functional S		Functionally	Impaired Str	ream		
Feature Description:	☐ Natural		✓ Artificia	l, man-mad	de 🗆 I	Manipulated						
Flow Regime:	☑ Ephem	eral	☐ Intermi	ttent		Perennial	☐ Connec Swale	ting				
Sinuosity within Survey Corridor: (check one)	☑ Straigh	t	□ Meand	ering			Owale					
Description Notes: A simple drainage dito created to drain water									with hydroph	nytic vegetation but	clearly	
Measurements												
Depth of Water:	ft.	N/A 🗹	Unknow	/n□ Wat	er Edge	to Water Ed	ge: ft.	N/A 🗹	OHWM Wid	dth: 1 ft.		
OHWM Indicator:		ear line o	n hank	□Shelvin	ı.a	□Wrested ve	agetation	□Scouring		□Water stainin	na .	
(check all that apply)	 ✓Be	nt, matte	d, or	□Wrack	•	☑Litter and o	· ·	□ Abrupt plan change	t community		·	
Dominant Substrate: (check all that apply)	□ Ве	edrock	□ Воц	ılder [✓ Cobbl	le 🗹 G	iravel	□ Sand	I Silt/ cla	ay 🗆 Organ	ic	
Observations												
Riparian Zone Preser	nt: 🗆 Ye	es	I	lo								
Vegetation Layers: (check all that apply)	☑ Tr	ees		Saplings/Sh	rubs	✓ Herbs						
Dominant Bank Vege The bank of the ditch	etation (list on the trail	road is m	nowed whi	le the south	h side is	dominated b	y mesic hard	wood species i	ncluding Be	tula alleghaniensis,	, Tilia	
americana, and Pteric Aquatic Habitats (ex: None.	lium aquilir submerged or	num. emerged aq	uatic vegetati	on, overhangir	ng banks/ro	oots, leaf packs, la	rge submerged v	vood, riffles, deep po	ools, etc.):			
Aquatic Organisms (None.	Observed ((list):										
Disturbances (ex: live Adjacent to roadside.	stock acces	s, manure i	in waterbod	y, waste disc	charge pi	pes):						
Observation Notes: No water currently pre	esent.											



sasb005e_E (across)



sasb005e_N (upstream)



sasb005e_S (downstream)

Waterbody Data 3	HOOL											
Description												
Project Name:						Date:			Waterbo	ody Su	rvey ID:	
Line 5 Relocation Project						2019-09-07			sasb003	3e		
State:	C	ounty/Pa	rish:			USGS Wate	body Nam	ie:	I			
WI	A	Ashland				None						
Company:	C	rew Mem	ber Initia	als:		Latitude:			Longitu	de:		
Enbridge	ľ	MAL/SAM				46.340891			-90.672	248		
Survey Type:	Centerlin	ne 🗆	Re-Rout	е		Access Road	□Facility	□Oth	er			
	River		Stream			Ditch	☐ Swale	□ Ca	nal	□ O	ther	
Water Appearance: (check one)	No Wate	er 🗆	Clear		□1	Turbid	☐Sheen of Surface	on □Sui	face Scum	□Alǫ	gal Mats	□Other
, ,	Highly F	unctional	Stream	☐ Moder	ately	y Functional S		■ Functiona	lly Impaired	Strear	m	
Feature Description: (check one)	Natural	V	Artificial,	man-made		Manipulated						
Flow Regime: (check one)	Epheme	ral 🗆	Intermitt	ent		Perennial	☐ Conne Swale	ecting				
Sinuosity within Survey Corridor: (check one)	Straight		Meande	ring								
created to drain water off		ocupo umo	. and one	oldoomod do	u	atorbody ditor	motodu or	a wouldne				
Measurements												
Depth of Water:ft.	. N	I/A Ľ	Unknowr	n□ Water E	Edge	to Water Ed	ge:f	ft. N/A	OHWM	Width:	<u>2</u> ft.	
OHWM Indicator: (check all that apply)	☐ Cle	ar line on	bank	Shelving		□Wrested v	egetation	Scouring	<u> </u>		□Water sta	ining
(спеск ан шасарру)		t, matted, ig vegetati		□Wrack line	!	□Litter and	lebris	☑ Abrupt p	lant commu		□Soil chara	acteristic
Dominant Substrate: (check all that apply)	□ Bed	drock	☐ Boul	der 🗹 C	Cobb	le 🗆 C	iravel	☐ Sand	☑ Silt	t/ clay	□ Or	ganic
Observations												
Riparian Zone Present:	☐ Yes	3	☑ No)								
Vegetation Layers: (check all that apply)	☑ Tre	es	□ Sa	aplings/Shrub	s	✓ Herbs						
Dominant Bank Vegetati The bank of the ditch on t	ne trail r	oad is mo		e the south si	de is	dominated b	y mesic har	dwood specie	es including	Betula	alleghanien	ısis,
Osmunda claytoniana, an Aquatic Habitats (ex: subm None.				n, overhanging ba	anks/r	oots, leaf packs, la	rge submerged	d wood, riffles, dee	ep pools, etc.):			
Aquatic Organisms Obse None.	erved (li	st):										
Disturbances (ex: livestock None.	c access,	manure in	waterbody	, waste dischar	ge pi	ipes):						
Observation Notes: Fed upslope serving as a towards the culvert which despite being fully vegeta	ultimate					_					-	



sasb003e_E (downstream)



sasb003e_S (across)



sasb003e_W (upstream)

Trator Body Bat	4 011000													
Description														
Project Name:						I	Date:				Waterbod	y Sur	vey ID:	
Line 5 Relocation Pro	ject						2019-09-07				sasb004e			
State:		County/	/Parish:			ı	USGS Wate	rbody Nam	ne:					
WI		Ashland	d				None							
Company:		Crew M	ember Ini	tials:			Latitude:				Longitude):		
Enbridge		MAL/SA	AΜ				46.340613				-90.67183	3		
Survey Type: (check one)	✓ Centerl	ine	☐ Re-Ro	ute		□A	ccess Road	□Facility		□Other				
Waterbody Type:	☐ River		☐ Stream	n			Ditch	✓ Swale		☐ Canal	[□ Oth	her	
Water Appearance: (check one)	✓ No War	ter	☐ Clear			□Ті	urbid	☐Sheen o	on [∃Surfac	e Scum	□Alga	al Mats	□Other
Existing Condition ^a : (check one)	☐ Highly	Function	nal Stream	n [Modera	ately	Functional S	Surface Stream	Func	tionally	Impaired S	tream	1	
Feature Description: (check one)	✓ Natural		☐ Artifici	al, man	-made		/lanipulated							
Flow Regime: (check one)	☑ Ephem	eral	☐ Interm	ittent		□ P	Perennial	☐ Conne Swale	ecting					
Sinuosity within Survey Corridor: (check one)	☐ Straigh	t	☑ Meand	dering										
Slight meander. Starti	ng point is	well elev	valed abov	ve trie e	ена роти.	-								
Measurements														
Depth of Water:	ft.	N/A 	Unknov	wn□	Water E	dge	to Water Ed	lge:1	ft.	N/A 🗹	OHWM Wi	idth:	<u>1</u> ft	i.
OHWM Indicator: (check all that apply)	□ Cl	ear line	on bank	□Sh	elving		□Wrested v	egetation	□Sco	uring			⊒Water s	staining
(oncon an anat appriy)		nt, matte		□Wr	ack line		☑ Litter and	debris	□Abr chang		t communit		⊒Soil cha change	aracteristic
Dominant Substrate: (check all that apply)	□ Ве	edrock	□ Во	ulder	Ľ Co	obble	e 🗆 (Gravel	□ Sar	nd	I Silt/ c	lay		Organic
Observations														
Riparian Zone Preser	nt: 🗆 Ye	es		No										
Vegetation Layers: (check all that apply)	☑ Tr	ees		Sapling	s/Shrubs	3	✓ Herbs	i						
Dominant Bank Vege Dominated by mesic I	etation (list nardwood s): pecies i	ncluding B	Betula a	lleghanie	ensis	, Osmunda o	claytoniana,	and Ath	yrium fili	ix-femina.			
Aquatic Habitats (ex: None.	submerged or	emerged a	iquatic vegeta	ition, over	hanging bar	nks/roo	ots, leaf packs, l	arge submerged	d wood, riffle	es, deep po	ools, etc.):			
Aquatic Organisms (None.	Observed ((list):												
Disturbances (ex: live None.	stock acces	s, manure	e in waterbo	dy, wast	e discharg	ge pip	pes):							
Observation Notes: No water currently pre	esent.													



sasb004e_E (downstream)



sasb004e_S (across)



sasb004e_W (upstream)

Traterseay Batt	. 011000									
Description										
Project Name:						Date:			Waterbody St	ırvey ID:
Line 5 Relocation Proj	ect					2019-09-20			sasa042i	
State:		County/	Parish:			USGS Wate	erbody Name):		
WI		Ashland	i			UNT to Kra	use Creek			
Company:		Crew M	ember Init	tials:		Latitude:			Longitude:	
Enbridge		NTT/DG	GL			46.336085			-90.681301	
Survey Type: (check one)	☑ Centerle	ine	☐ Re-Ro	ute		Access Road	□Facility	□Other		
Waterbody Type: (check one)	☐ River		✓ Stream	n		Ditch	☐ Swale	☐ Cana		Other
Water Appearance: (check one)	☐ No Wa	ter	☑ Clear			Turbid	☐Sheen or Surface	n □Surfac	e Scum	gal Mats □Other
Existing Condition ^a : (check one)	□ Highly	Function	nal Stream	V	Moderatel	y Functional :		☐ Functionally	Impaired Strea	m
Feature Description: (check one)	✓ Natural		☐ Artificia		made 🗆	Manipulated				
Flow Regime: (check one)	☐ Ephem	eral	✓ Interm	ittent		Perennial	☐ Connection Connection	ting		
Sinuosity within Survey Corridor: (check one)	□ Straigh	t	✓ Meand	dering						
Measurements										
Depth of Water: 0.25	<u>5_</u> ft.	N/A□	Unknov	wn□	Water Edge	e to Water Ed	lge: <u>6</u> ft.	. N/A□	OHWM Width	: <u>6</u> ft.
OHWM Indicator:	□ Cl	ear line	on bank	☑Sh	elving	□Wrested v	egetation	□Scouring		☑ Water staining
(check all that apply)		nt, matte ing vege		□Wr	ack line	☑ Litter and	debris	☑ Abrupt plan change	t community	☐Soil characteristic change
Dominant Substrate: (check all that apply)	□Ве	edrock	☑ Bo	ulder		ole 🗆 (Gravel	□ Sand	☑ Silt/ clay	☐ Organic
Observations										
Riparian Zone Preser	it: 🗹 Ye	es	1	No						
Vegetation Layers: (check all that apply)	☑ Tr	ees	v (Sapling	s/Shrubs	☑ Herbs	i			
Dominant Bank Vege Ulmus americana, Fra	tation (list xinus nigra): a, Acer s	accharum,	, Pteridi	um aquilinu	ım, Carex intı	ımescens.			
Aquatic Habitats (ex: 9 Pools of water through	submerged or 10ut.	emerged a	quatic vegetat	tion, overh	nanging banks/i	roots, leaf packs, l	arge submerged v	wood, riffles, deep p	ools, etc.):	
Aquatic Organisms C None.	bserved ((list):								
Disturbances (ex: live Old logging road runs				dy, waste	e discharge p	pipes):				
Observation Notes: Flowing at southernmo	ost portion	leading	downhill in	nto diffu	se flow.					



sasa042i_E (across)



sasa042i_NW (downstream)



sasa042i_SE (upstream)

Waterbody Date	a Sileet										
Description											
Project Name:						Date:			Waterbody	Survey ID:	
Line 5 Relocation Proj	ect					2019-10-15			sasa069i		
State:		County/I	Parish:			USGS Wate	rbody Name	: :			
WI		Ashland				UNT to Bad	River				
Company:		Crew Me	mber Init	tials:		Latitude:			Longitude:		
Enbridge		KDF/DG	L			46.339012			-90.668333		
Survey Type: (check one)	☑ Centerl	ine	☐ Re-Ro	ute		Access Road	□Facility	□Other			
Waterbody Type:	□ River		☑ Stream	n		Ditch	☐ Swale	☐ Canal		Other	
Water Appearance: (check one)	☐ No Wat	ter	✓ Clear			Γurbid	□Sheen on Surface	□Surfac	e Scum 🛚	Algal Mats	□Other
Existing Condition a: (check one)	☐ Highly	Function	al Stream	V	Moderately	y Functional S		☐ Functionally	Impaired Str	eam	
Feature Description: (check one)	✓ Natural		☐ Artificia	al, man-n	nade 🗆	Manipulated					
Flow Regime: (check one)	☐ Ephem	eral	✓ Interm	ittent		Perennial	☐ Connec	ting			
Sinuosity within Survey Corridor: (check one)	☐ Straigh	t	☑ Meand	dering							
Measurements								N/AFT			
Depth of Water: 0.25	<u>5</u> ft.	N/A□	Unknov	wn□ V	Vater Edge	e to Water Ed	ge: 3 ft.	N/A□	OHWM Wid	l th: <u>4</u> ft.	
OHWM Indicator: (check all that apply)	□ CI	ear line o	n bank	□Shel	lving	□Wrested v	egetation	☑ Scouring		□Water sta	aining
(oneon an true apply)		nt, matte		□Wra	ck line	☑ Litter and	debris	□Abrupt plan change	t community	□Soil char change	acteristic
Dominant Substrate: (check all that apply)	□ Ве	edrock	□ Во	ulder	□ Cobb	le 🗆 🤆	Gravel	□ Sand	I Silt/ cla	ay 🗆 O	rganic
Observations											
Riparian Zone Preser	nt: 🗹 Ye	es	1	No							
Vegetation Layers: (check all that apply)	☑ Tr	ees	v (Saplings/	/Shrubs	☑ Herbs					
Dominant Bank Vege Carex bromoides, Car	etation (list rex pedund): ulata, Be	tula allegh	naniensis	s, Acer rub	rum, Ostrya v	irginiana, Dry	opteris interme	edia.		
Aquatic Habitats (ex: None.	submerged or	emerged aq	uatic vegetat	tion, overha	anging banks/r	oots, leaf packs, la	arge submerged v	wood, riffles, deep po	ools, etc.):		
Aquatic Organisms C None.	Observed ((list):									
Disturbances (ex: live Erosion.	stock acces	s, manure	in waterboo	dy, waste	discharge p	ipes):					
Observation Notes: None.											



sasa069i_E (downstream)



sasa069i_S (across)



sasa069i_W (upstream)

Trater Body Batt	4 011000										
Description											
Project Name:						Date:			Waterbody Sเ	ırvey ID:	
Line 5 Relocation Proj	ect					2019-09-20			sasa041e		
State:		County/P	Parish:			USGS Wate	rbody Nam	e:			
WI		Ashland				UNT to Krau	se Creek				
Company:		Crew Me	mber Initi	ials:		Latitude:			Longitude:		
Enbridge		NTT/DGI	L			46.3367531			-90.683206		
Survey Type: (check one)	✓ Center	line [□ Re-Rou	ıte		Access Road	□Facility	□Other			
Waterbody Type: (check one)	□ River	[☑ Stream	l		Ditch	☐ Swale	☐ Cana	□С	Other	
Water Appearance: (check one)	✓ No Wa	ter [□ Clear		□Т	Turbid	☐Sheen o	n □Surfac	e Scum □Al	gal Mats □Other	
Existing Condition ^a :	☐ Highly	Functiona	al Stream	⊈ Mo	derately	y Functional S		☐ Functionally	Impaired Strea	m	
Feature Description: (check one)	✓ Natura	[□ Artificia	l, man-mad	de 🗆 I	Manipulated					
Flow Regime: (check one)	☑ Ephem	eral [☐ Intermi	ttent		Perennial	☐ Conne Swale	cting			
Sinuosity within Survey Corridor: (check one)	☐ Straigh	nt [☑ Meand	ering							
Description Notes: Ephemeral drainage t flowing water in portio		ers down	a steep hi	illside. Mos	s-cover	ed boulders p	resent throu	ughout. Pools of	water present	along the drainage w	ith
Measurements											
Depth of Water:	ft.	N/A ✓	Unknow	/n□ Wat	er Edge	to Water Ed	ge: f	t. N/A🗹	OHWM Width	: <u>4</u> ft.	
OHWM Indicator: (check all that apply)	□С	lear line o	n bank	☑Shelvin	ıg	□Wrested v	egetation	✓ Scouring		☑ Water staining	
, , , , , , , , , , , , , , , , , , , ,		ent, matted ing vegeta		□Wrack	line	☑ Litter and	debris	☑Abrupt plan change	t community	☐Soil characteristic change	
Dominant Substrate: (check all that apply)		edrock	☑ Bou	ılder [☐ Cobb	le 🗹 🤇	Gravel	☑ Sand	☐ Silt/ clay	☐ Organic	
Observations											
Riparian Zone Preser	nt: 🗆 Ye	es	V N	lo							
Vegetation Layers: (check all that apply)	☑ Tr	ees	Ø S	Saplings/Sh	ırubs	✓ Herbs					
Dominant Bank Vege Ulmus americana, Fra	_										
Aquatic Habitats (ex: None.	submerged or	emerged aqu	uatic vegetati	on, overhangir	ng banks/ro	oots, leaf packs, la	arge submerged	wood, riffles, deep p	ools, etc.):		
Aquatic Organisms O Frogs.	Observed	(list):									
Disturbances (ex: live No disturbances.	stock acces	s, manure i	n waterbod	ly, waste disc	charge pi	ipes):					
Observation Notes: Thick duff layer surrou	unding the	drainage.									



sasa041e_E (across)



sasa041e_NW (downstream)



sasa041e_S (upstream)

Traterseay Batt	. 0.1.000									
Description										
Project Name:						Date:			Waterbody St	ırvey ID:
Line 5 Relocation Proj	ect					2019-09-07			sasa008p	
State:		County/	Parish:			USGS Wate	erbody Name):		
WI		Ashland	i			UNT to Bac	River			
Company:		Crew M	ember Ini	tials:		Latitude:			Longitude:	
Enbridge		NTT/DG	GL			46.337599			-90.662046	
Survey Type: (check one)	☑ Centerl	ine	☐ Re-Ro	ute		Access Road	□Facility	□Other		
Waterbody Type: (check one)	□ River		☑ Stream	n		Ditch	☐ Swale	☐ Cana		Other
Water Appearance: (check one)	☐ No Wa	ter	☑ Clear			Turbid	☐Sheen or Surface	n □Surfac	e Scum	gal Mats □Other
Existing Condition ^a : (check one)	☐ Highly	Function	nal Stream	V	Moderatel	y Functional		☐ Functionally	Impaired Strea	m
Feature Description: (check one)	✓ Natural		☐ Artificia	al, man-r		Manipulated				
Flow Regime: (check one)	☐ Ephem	eral	☐ Interm	ittent	V	Perennial	☐ Connection Connection	ting		
Sinuosity within Survey Corridor: (check one)	□ Straigh	t	✓ Meano	dering						
Measurements										
Depth of Water: 1	_ft.	N/A□	Unknov	wn□ V	Vater Edg	e to Water Ed	lge: <u>5</u> ft.	. N/A□	OHWM Width	: <u>5</u> ft.
OHWM Indicator: (check all that apply)	□ CI	ear line	on bank	□She	lving	□Wrested \	egetation	□Scouring		□Water staining
(orosa an anacappy)	⊻ Be miss	nt, matte	ed, or tation	□Wra	ick line	□Litter and	debris	✓ Abrupt plan change	t community	☑Soil characteristic change
Dominant Substrate: (check all that apply)		edrock	□ Во	ulder	☐ Cobb	ole 🗆	Gravel	□ Sand	□ Silt/ clay	☑ Organic
Observations										
Riparian Zone Preser (check one)	nt: 🗹 Ye	es		No						
Vegetation Layers: (check all that apply)	☑ Tr	ees	Ø :	Saplings	/Shrubs	☑ Herbs	3			
Dominant Bank Vege Fraxinus nigra, Alnus	tation <i>(list</i> incana, La): portea ca	anadense,	Elymus	virginicus	, Symphyotric	hum puniceu	m.		
Aquatic Habitats (ex: s Flowing water with poor	submerged or ols for aqu	emerged a	quatic vegeta rtebrates a	tion, overha	anging banks/i	roots, leaf packs,	arge submerged v	wood, riffles, deep p	ools, etc.):	
Aquatic Organisms C None.	bserved ((list):								
Disturbances (ex: live: Beaver activity.	stock acces	s, manure	in waterboo	dy, waste	discharge p	pipes):				
Observation Notes: Logs and debris throu	ghout with	evidence	e of beave	er activity	<i>1</i> .					



sasa008p_E (across)



sasa008p_NE (upstream)



sasa008p_SW (downstream)

Waterbody Data Sil	CCL							
Description								
Project Name:				Date:			Waterbody S	urvey ID:
Line 5 Relocation Project				2019-09-26			sasc029e	
State:	County	/Parish:		USGS Wate	rbody Name	•		
WI	Ashland	d		None				
Company:	Crew M	lember Initial	s:	Latitude:			Longitude:	
Enbridge	BRG/JS	SW		46.327704			-90.681782	
Survey Type:	enterline	☐ Re-Route		Access Road	□Facility	□Other		
Waterbody Type: ☐ Ri	ver	☐ Stream	ď	Ditch	☐ Swale	☐ Canal		Other
Water Appearance:	Water	☐ Clear		Turbid	✓Sheen on Surface	□Surfac	e Scum □A	lgal Mats □Other
	ighly Function	nal Stream	☐ Moderatel	y Functional S		Functionally	Impaired Strea	am
Feature Description: ☐ Na (check one)	atural	☑ Artificial, r	man-made 🗆	Manipulated				
Flow Regime:	hemeral	☐ Intermitte	nt 🗆	Perennial	☐ Connect	ting		
Sinuosity within Survey Corridor:	raight	☐ Meanderi	ng					
The feature is a small roads	side ditori ass	ociated with w	velianu wascu4t	Je.				
Measurements								
Depth of Water: 0.1 ft.	N/A□	Unknown	□ Water Edge	e to Water Ed	ge: <u>0.5</u> ft.	N/A□	OHWM Width	1: 1ft.
OHWM Indicator: (check all that apply)	☐ Clear line	on bank 🗆	Shelving	□Wrested v	egetation	☑ Scouring		□Water staining
	☑Bent, matt missing vege		□Wrack line	□Litter and o	debris	□Abrupt plan change	t community	☐Soil characteristic change
Dominant Substrate: (check all that apply)	□ Bedrock	☐ Boulde	er □ Cobb	ole 🗆 G	Gravel	☑ Sand	□ Silt/ clay	□ Organic
Observations								
	□ Yes	☑ No						
Vegetation Layers: (check all that apply)	☐ Trees	□ Sap	olings/Shrubs	☑ Herbs				
Dominant Bank Vegetation Sagittaria latifolia, Calamag	າ (list): rostis canade	ensis, Scirpus	cyperinus.					
Aquatic Habitats (ex: submered Overhanging vegetation.	-	aquatic vegetation,	overhanging banks/r	roots, leaf packs, la	rge submerged w	vood, riffles, deep po	ools, etc.):	
Aquatic Organisms Obser None.	ved (list):							
Disturbances (ex: livestock a Polluted runoff, runoff from	access, manure gravel road a	e in waterbody, v ind mowed fie	waste discharge p ld.	ipes):				
Observation Notes: The stream receives runoff	from the adja	acent gravel ro	oad, and only ex	ists due to the	roadside loc	ation.		



sasc029e_E (downstream)



sasc029e_S (across)



sasc029e_W (upstream)

Open Waterboo	ay Data	Sneet							
Description									
Project Name:					Date:			Waterbody Sเ	ırvey ID:
Line 5 Relocation Pro	ject				2019-09-26			oasc002	
State:		County/Pa	arish:		USGS Wate	rbody Name	:		
WI		Ashland			None				
Company:		Crew Men	nber Initials:		Latitude:			Longitude:	
Enbridge	ļ	BRG/JSW	I		46.327279			-90.681409	
Survey Type: (check one)	✓ Centerl	ine 🗆	Re-Route		Access Road	□Facility	□Other		
Waterbody Type: (check one)	☐ Stock F	ond [☐ Natural Pond	, v	Fishing Pond	☐ Lake	☐ Other		
Water Appearance: (check one)	☐ No Wa	ter 🔽	1 Clear		Turbid	□Sheen on Surface	□Surfac	e Scum □Al	gal Mats □Other
Feature Quality: (check one)	☑ High		Moderate		Low	Curiaco			
Feature Description:	☐ Natural	V	Artificial, mar	n-made 🗆	Manipulated				
associated with wetland	nd feature v	wasc039e,	which is a see	p that disch	arges water in	to the waterb	ody.		
Measurements									
Depth of Water:	ft.	N/A□	Unknown						
OHWM Indicator: (check all that apply)	□ Ci	lear line on	bank □St	helving	□Wrested v	egetation	□Scouring		□Water staining
(Gibon all that apply)		ent, matted, ing vegetat		rack line	□Litter and	debris	☑Abrupt plan change	t community	☐Soil characteristic change
Dominant Substrate: (check all that apply)		edrock	☐ Boulder	□ Cobb	ole 🗆 C	Gravel	☐ Sand	 Silt/ clay	☐ Organic
Observations									
Riparian Zone Preser	nt: 🗹 Ye	es	□ No	_					
Vegetation Layers: (check all that apply)	□ Tr	ees	☐ Saplinç	gs/Shrubs	✓ Herbs				
Dominant Bank Vege Sagittaria latifolia, Nyi Aquatic Habitats (ex: Aquatic emergent veg Aquatic Organisms (None. Disturbances (ex: live Runoff from surroundi	submerged or getation.	emerged aqua	atic vegetation, over	rhanging banks/	/roots, leaf packs, la				
Observation Notes: The waterbody is, or viside of the pond.	was historio	ally, used t	for fishing, as e	evidenced b	y a small dock	and beached	d canoe outside	e of the survey	area on the opposite



oasc002_N



oasc002_NE



oasc002_SE

Waterbody Date	a Silect									
Description										
Project Name:						Date:			Waterbody	Survey ID:
Line 5 Relocation Proj	ect					2019-09-30			sasa065i	
State:		County/I	Parish:			USGS Wate	rbody Name	•		
WI		Ashland				None				
Company:		Crew Me	ember Init	tials:		Latitude:			Longitude:	
Enbridge		NTT/DG	L			46.322016			-90.678305	
Survey Type: (check one)	✓ Centerle	ine	☐ Re-Ro	ute		Access Road	□Facility	□Other		
Waterbody Type: (check one)	☐ River		✓ Stream	า		Ditch	☐ Swale	☐ Canal		Other
Water Appearance: (check one)	□ No Wa	ter	✓ Clear			Turbid	□Sheen on Surface	□Surfac	e Scum	Algal Mats □Other
Existing Condition ^a :	□ Highly	Function	al Stream	V	Moderatel (ly Functional S		☐ Functionally	Impaired Str	eam
Feature Description: (check one)	✓ Natural		☐ Artificia	al, man-	made \square	Manipulated				
Flow Regime: (check one)	☐ Ephem	eral	✓ Interm	ittent		Perennial	☐ Connect	ting		
Sinuosity within Survey Corridor: (check one)	□ Straigh	nt	✓ Meand	dering						
Measurements										
Depth of Water: 0.5	ft.	N/A□	Unknov	wn 🗆 📙	Nater Edg	e to Water Ed	ge: <u>3</u> ft.	N/A□	OHWM Wid	lth: <u>5</u> ft.
OHWM Indicator:	□ CI	ear line o	on bank	□She	elving	□Wrested v	egetation	□Scouring		□Water staining
(check all that apply)		ent, matte		□Wra	ack line	☑ Litter and	debris	✓ Abrupt plan change	t community	☐ Soil characteristic change
Dominant Substrate: (check all that apply)	□Ве	edrock	□ Во	ulder	□ Cobb	ole 🗹 🤇	Gravel	☑ Sand	☐ Silt/ cla	ay 🗆 Organic
Observations										
Riparian Zone Preser	nt: 🗹 Ye	es		No						
Vegetation Layers: (check all that apply)	☑ Tr	ees	V S	Saplings	s/Shrubs	✓ Herbs				
Dominant Bank Vege Fraxinus nigra, Carex	etation (list bromoides	t): s, Dryopte	eris interm	iedia.						
Aquatic Habitats (ex: Pools.	submerged or	emerged aq	quatic vegetal	tion, overh	anging banks/	roots, leaf packs, la	irge submerged w	ood, riffles, deep po	ools, etc.):	
Aquatic Organisms (None.	Observed ((list):								
Disturbances (ex: live None.	stock acces	s, manure	in waterboo	dy, waste	discharge p	pipes):				
Observation Notes: Large boulders preser	nt along we	etland frin	ige. Featu	re asso	ciated with	wetland wasa	128f.			



sasa065i_N (upstream)



sasa065i_S (downstream)



sasa065i_W (across)

waterbody bate	a Sileet										
Description											
Project Name:						Date:			Waterbody	y Survey ID:	
Line 5 Relocation Pro	ect					2019-09-19			sase003e		
State:		County/F	Parish:			USGS Water	body Name	: :			
Wisconsin		Ashland				UNT to Silve	r Creek				
Company:		Crew Me	ember Init	tials:		Latitude:			Longitude	:	
Enbridge		KDF/ARI	K			46.371907			-90.723766	6	
Survey Type: (check one)	✓ Centerl	ine	☐ Re-Ro	ute		Access Road	□Facility	□Other			
Waterbody Type: (check one)	□ River		✓ Stream	า		Ditch	☐ Swale	☐ Canal		☐ Other	
Water Appearance:	☑ No Wa	ter	□ Clear		ПΤ	urbid	☐Sheen on Surface	□Surfac	e Scum	□Algal Mats	□Other
Existing Condition a: (check one)	□ Highly	Function	al Stream	Y M	oderately	Functional S		☐ Functionally	Impaired St	tream	
Feature Description:	✓ Natural		☐ Artificia	al, man-ma	ade 🗆 I	Manipulated					
Flow Regime: (check one)	E Ephem	eral	☐ Interm	ittent		Perennial	☐ Connect	ting			
Sinuosity within Survey Corridor: (check one)	☐ Straigh	it	☑ Meand	dering			<u> </u>				
Description Notes: The ephemeral strear line the bank.	n is located	d in a ravi	ne within	a northern	mesic fo	rest. The stre	am connects	to sase002e a	nd discharç	ges into nearb	y river. Trees
Measurements											
Depth of Water:	ft.	N/A 🗹	Unknov	wn□ Wa	ter Edge	to Water Ed	ge: ft.	N/A	OHWM Wi	dth: <u>1</u> f	t.
OHWM Indicator: (check all that apply)	□ CI	ear line o	n bank	□Shelvi	ng	□Wrested ve	egetation	☑ Scouring		□Waters	staining
		ent, matted ing vegeta		□Wrack	line	☑ Litter and o	lebris	□Abrupt plan change	t communit	y □Soil cha change	aracteristic
Dominant Substrate: (check all that apply)	□Ве	edrock	🗹 Во	ulder	☐ Cobb	le 🗆 G	ravel	□ Sand	☑ Silt/ cl	lay 🗆 🖯	Organic
Observations											
Riparian Zone Preser	nt: 🗆 Ye	es	<u> </u>	No							
Vegetation Layers: (check all that apply)	☑ Tr	ees	v (Saplings/S	hrubs	☑ Herbs					
Dominant Bank Vege Fraxinus nigra, Athyrid	tation (list um filix-fem	hina, and	Carex pe	dunculata.							
Aquatic Habitats (ex: Downed woody debris	submerged or S.	emerged aq	uatic vegetat	tion, overhang	jing banks/ro	oots, leaf packs, la	rge submerged w	wood, riffles, deep po	ools, etc.):		
Aquatic Organisms (None.	Observed ((list):									
Disturbances (ex: live None.	stock acces	s, manure i	in waterboo	dy, waste dis	scharge pi	pes):					
Observation Notes: No water currently pre	esent.										



sase003e_E (downstream)



sase003e_S (upstream)



sase003e_W (across)

APPENDIX F

Waterbody Data Sheets
Part 15 of 24

Open Waterbody Data Sheet

Open waterboo	iy Data	Sneet							
Description									
Project Name:					Date:			Waterbody Su	rvey ID:
Line 5 Relocation Proj	ect				2019-09-30			oasd001	
State:		County/	/Parish:		USGS Wate	rbody Name			
WI		Ashland	i		None				
Company:		Crew M	ember Initials:		Latitude:			Longitude:	
Enbridge		MAL/O	ΓG		46.319596			-90.678633	
Survey Type: (check one)	☐ Centerl	ine	✓ Re-Route	$\Box I$	Access Road	□Facility	□Other		
Waterbody Type: (check one)	☐ Stock F	ond	☐ Natural Pond		Fishing Pond	☐ Lake	☑ Other		
Water Appearance:	☐ No Wa	ter	☐ Clear	Ø 7	Turbid	□Sheen on Surface	□Surfac	e Scum □Al	gal Mats □Other
Feature Quality:	□ High		☐ Moderate		Low	Guriago			
Feature Description:	✓ Natural		☐ Artificial, man	-made \square	Manipulated				
The feature is an oxbo	ow off of th	e Bad Ri	iver which is fed fi	rom a culver	t associated v	vith County H	wy GG. Assoc	iated with wetla	and wasd002s.
Measurements									
Depth of Water: 3	ft.	N/A□	Unknown□						
OHWM Indicator: (check all that apply)	□ Cl	ear line	on bank □Sh	elving	□Wrested v	egetation	□Scouring		□Water staining
, , , , , , , , , , , , , , , , , , , ,		nt, matte		ack line	□Litter and o	debris	☑Abrupt plan change	t community	☐Soil characteristic change
Dominant Substrate: (check all that apply)	□ Ве	edrock	☐ Boulder	☐ Cobb	le 🗆 G	Gravel	☐ Sand	 Silt/ clay	☐ Organic
Observations									
Riparian Zone Preser (check one)	nt: 🗹 Ye	es	□ No						
Vegetation Layers: (check all that apply)	□ Tr	ees	 Sapling	s/Shrubs	坚 Herbs				
Dominant Bank Vege Alnus incana, Salix pe	tation (list tiolaris.	·):							
Aquatic Habitats (ex: s Open water.	submerged or	emerged a	quatic vegetation, overl	hanging banks/ro	oots, leaf packs, la	rge submerged w	ood, riffles, deep po	ools, etc.):	
Aquatic Organisms O None.	Observed ((list):							
Disturbances (ex: live The feature receives p	stock acces olluted rur	s, manure noff from	in waterbody, wast the roadway and	e discharge pi has invasive	ipes): e species cov	er at the mar	gins.		
Observation Notes: There were recent hea	avy rains a	nd veget	tation is currently	inundated w	ithin the cente	er of the featu	re.		



oasd001_E



oasd001_N



oasd001_W

Trater Body Batt	4 011000									
Description										
Project Name:						Date:			Waterbody St	ırvey ID:
Line 5 Relocation Proj	ect					2019-10-02	2		sasd004p	
State:		County	/Parish:			USGS Wat	erbody Name	9 :	L	
WI		Ashland	t			Bad River				
Company:		Crew M	ember Ini	tials:		Latitude:			Longitude:	
Enbridge		AGG/O	TG			46.317817			-90.677316	
Survey Type: (check one)	✓ Center	ine	☐ Re-Ro	oute		Access Road	□Facility	□Other		
Waterbody Type: (check one)	☑ River		☐ Strear	n		Ditch	☐ Swale	☐ Cana	I 🗆 C	Other
Water Appearance: (check one)	☐ No Wa	ter	☑ Clear			Turbid	□Sheen o Surface	n □Surfac	e Scum	gal Mats □Other
Existing Condition a: (check one)	☐ Highly	Function	nal Stream) V	Moderate	ly Functional		☐ Functionally	Impaired Strea	m
Feature Description: (check one)	✓ Natura		☐ Artifici	al, man-	made 🗆	Manipulated				
Flow Regime: (check one)	☐ Ephem		☐ Interm		V	Perennial	☐ Connec Swale	cting		
Sinuosity within Survey Corridor: (check one)	☐ Straigh	nt	✓ Mean	dering						
Measurements										
Depth of Water: 7	ft.	N/A□	Unkno	wn□	Water Edg	e to Water E	dge : <u>45</u> ft	N/A 🗆	OHWM Width	: <u>45</u> ft.
OHWM Indicator: (check all that apply)	Ľ C	ear line	on bank	□She	elving	□Wrested	vegetation	Scouring		□Water staining
(orosa all trat apply)		ent, matte ing vege		□Wra	ack line	□Litter and	debris	□Abrupt plar	t community	☐Soil characteristic change
Dominant Substrate: (check all that apply)	□Ве	edrock	□ Во	ulder	☐ Cobl	ble 🗹	Gravel	☑ Sand	 Silt/ clay	☐ Organic
Observations										
Riparian Zone Preser	nt: 🗹 Ye	es		No						
Vegetation Layers: (check all that apply)	☑ Tr	ees		Sapling	s/Shrubs	☑ Herb	S			
Dominant Bank Vege Acer saccharinum, Do	e tation <i>(list</i> bellingeria	') : umbellat	a, Solidag	o gigant	ea, Alnus i	ncana.				
Aquatic Habitats (ex: Overhanging vegetation	submerged or On, overha	emerged a nging ba	quatic vegeta nks, riffles	ition, overh s, pools,	nanging banks/ woody del	roots, leaf packs, oris.	large submerged	wood, riffles, deep p	ools, etc.):	
Aquatic Organisms O None.	Observed	(list):								
Disturbances (ex: live Culverts, railroads, bri		s, manure	in waterbo	dy, waste	e discharge p	oipes):				
Observation Notes: The Bad River is a pe is a high amount of er			_					•	g the stream is	presently shrubs. There



sasd004p_E (upstream)



sasd004p_N (downstream)



sasd004p_NE (across)

Traterious Bata e									
Description									
Project Name:				Date:			Waterbody S	urvey ID:	
Line 5 Relocation Project				2019-10-02			sasd005i		
State:	County	/Parish:		USGS Wate	rbody Name	9:			
WI	Ashland	b		UNT to Bad	River				
Company:	Crew M	lember Initials	s:	Latitude:			Longitude:		
Enbridge	AGG/O	TG		46.314993			-90.677351		
	Centerline	☐ Re-Route		Access Road	□Facility	□Other			
(check one) Waterbody Type: (check one)	River	☑ Stream		Ditch	☐ Swale	☐ Canal		Other	
Water Appearance:	No Water	☑ Clear		Turbid	□Sheen o	n □Surfac	e Scum 🗆 🛭	lgal Mats	□Other
(check one) Existing Condition a: (check one)	Highly Function	nal Stream	✓ Moderate	ely Functional S	Surface Stream	☐ Functionally	Impaired Strea	am	
Feature Description:	Natural	☐ Artificial, r	man-made □	Manipulated					
	Ephemeral	✓ Intermitte	nt 🗆	Perennial	☐ Connec	cting			
Sinuosity within Survey Corridor: (check one)	Straight	✓ Meanderi	ng						
Measurements									
Depth of Water: 1 ft.	. N/A□	Unknown	☐ Water Edç	ge to Water Ed	ge : <u>1</u> ft	N/A 🗆	OHWM Widtl	n: <u>1</u> f	t.
OHWM Indicator:	☐ Clear line	on bank 🗆	□Shelving	□Wrested v	egetation	□Scouring		□Water	staining
(check all that apply)	☑Bent, matte missing vege		□Wrack line	□Litter and	debris	□Abrupt plan	t community	□Soil cha	aracteristic
Dominant Substrate: (check all that apply)	☐ Bedrock	☐ Boulde	er 🗆 Cob	oble 🗆 (Gravel	□ Sand	I Silt/ clay	•	Organic
Observations									
Riparian Zone Present:	☑ Yes	□ No							
Vegetation Layers: (check all that apply)	✓ Trees	☑ Sap	olings/Shrubs	☑ Herbs					
Dominant Bank Vegetati Fraxinus nigra, llex vertici	on <i>(list)</i> : llata, Carex bro	omoides.							
Aquatic Habitats (ex: subm Pools, overhanging veget	erged or emerged a ation.	iquatic vegetation,	overhanging banks	s/roots, leaf packs, la	arge submerged	wood, riffles, deep po	ools, etc.):		
Aquatic Organisms Observance.	erved (list):								
Disturbances (ex: livestock Culverts.	c access, manure	∍ in waterbody, v	waste discharge	pipes):					
Observation Notes: The feature is an intermitt poorly defined but it become		-		d006f. There ar	e areas with	in the wetland w	here the strea	am channel	becomes



sasd005i_N (downstream)



sasd005i_SW (upstream)



sasd005i_W (across)

waterbody bate	a Sileet										
Description											
Project Name:						Date:			Waterbody	y Survey ID:	
Line 5 Relocation Pro	ect					2019-10-03			sasc032i		
State:		County/P	arish:			USGS Water	rbody Name	:			
WI		Ashland				UNT to Bad	River				
Company:		Crew Me	mber Initi	ials:		Latitude:			Longitude	:	
Enbridge		BRG/JSV	٧			46.309388			-90.67116	1	
Survey Type: (check one)	☐ Centerl	ine [☑ Re-Rou	ıte	$\Box A$	Access Road	□Facility	□Other			
Waterbody Type: (check one)	□ River	[☑ Stream			Ditch	☐ Swale	☐ Canal		Other	
Water Appearance: (check one)	☐ No Wa		☑ Clear		□1	Γurbid	☐Sheen on Surface	ı □Surfac	e Scum [□Algal Mats	□Other
Existing Condition ^a : (check one)	☑ Highly	Functiona	al Stream	□ Mod	derately	y Functional S	tream [☐ Functionally	Impaired St	tream	
Feature Description: (check one)	✓ Natural	[□ Artificia	l, man-mad	е 🗆	Manipulated					
Flow Regime: (check one)	☐ Ephem	eral [✓ Intermi	ttent		Perennial	☐ Connection Connection	ting			
Sinuosity within Survey Corridor: (check one)	☐ Straigh	it [⊻ Meand	ering							
Description Notes: The feature is a small seepage, and is asso					om a m	esic forest int	o a roadside	ditch wetland (wasc049e).	. The stream is	s fed by hillside
Measurements											
Depth of Water: 0.1	ft.	N/A□	Unknow	_{/n□} Wate	r Edge	to Water Ed	ge: <u>2</u> ft.	N/A 🗆	OHWM Wi	dth: 2 f	<u> </u>
OHWM Indicator: (check all that apply)	□ CI	ear line o	n bank	□Shelving	9	□Wrested ve	egetation	□Scouring		□Waters	staining
		nt, matted		□Wrack li	ne	□Litter and o	debris	□Abrupt plan change	t communit	y □Soil cha change	aracteristic
Dominant Substrate: (check all that apply)	□ Ве	edrock	□ Вои	ılder	Cobb	le 🗆 G	Gravel	□ Sand	☑ Silt/ cl		Organic
Observations											
Riparian Zone Preser	nt: 🗹 Ye	es	□ N	lo							
Vegetation Layers: (check all that apply)	☑ Tr	ees	v s	Saplings/Shr	ubs	✓ Herbs					
Dominant Bank Vege Fraxinus pennsylvanio	ca, Fraxinu	s nigra, B	•	ghaniensis,	Osmun	nda claytonian	a, Dryopteris	intermedia, At	hyrium filix-	femina, Ulmus	s americana,
Thuja occidentalis, Ac Aquatic Habitats (ex:				on overhanging	n hanks/r	oots leaf packs la	rae submeraed v	vood riffles deep po	ools etc.):		
Overhanging vegetation	on.		auno rogotun	on, ovomangm	y zamo,	ooto, roai paono, ro	.go ouso.gou .	,	so.e, etc./ :		
Aquatic Organisms (None.	Observed ((list):									
Disturbances (ex: live Runoff from nearby page 1)	stock acces: aved road,	s, manure i historic lo	n waterbod gging.	y, waste discl	harge pi	ipes):					
Observation Notes: Rain events occurred	in the days	s prior to s	survey.								



sasc032i_E (upstream)



sasc032i_N (across)



sasc032i_W (downstream)

Waterbody Date	Jileet									
Description										
Project Name:						Date:			Waterbody S	Survey ID:
Line 5 Relocation Proj	ect					2019-10-03			sasc033e	
State:		County/F	Parish:			USGS Water	body Name	:		
WI		Ashland				UNT to Bad	River			
Company:		Crew Me	mber Init	ials:		Latitude:			Longitude:	
Enbridge		BRG/JSV				46.309749			-90.666254	
Survey Type: (check one)	☐ Centerl	ine [☑ Re-Rou	ute		Access Road	□Facility	□Other		
Waterbody Type:	□ River	[☑ Stream	l		Ditch	☐ Swale	☐ Canal		Other
Water Appearance: (check one)	☐ No Wa	ter [✓ Clear			Turbid	☐Sheen or Surface	n □Surfac	e Scum 🗆 🗸	Algal Mats □Other
Existing Condition a: (check one)	☐ Highly	Functiona	al Stream	☑ Mode	erately	y Functional S		☐ Functionally	Impaired Stre	am
Feature Description: (check one)	☐ Natural	[□ Artificia	I, man-made		Manipulated				
Flow Regime: (check one)	☑ Ephem	eral	□ Intermi	ttent		Perennial	☐ Connec Swale	ting		
Sinuosity within Survey Corridor: (check one)	☐ Straigh	t I	☑ Meand	ering						
Description Notes: The feature is a small manipulation by loggir		at dissipat	es into we	etland wasc0	51. Th	ne feature is n	aturally occu	rring but likely o	only exists du	e to landscape
Measurements										
Depth of Water: 0.2	ft.	N/A□	Unknow	_{/n□} Water	Edge	e to Water Ed	ge: <u>3</u> ft.	N/A□	OHWM Widt	h: <u>3</u> ft.
OHWM Indicator: (check all that apply)	□ Cl	ear line o	n bank	□Shelving		□Wrested ve	egetation	□Scouring		□Water staining
(спеск ан тасарруу)		nt, matted		□Wrack lin	e	□Litter and o	lebris	□Abrupt plan change	t community	□Soil characteristic change
Dominant Substrate: (check all that apply)	□ Ве	edrock	□ Воц	ılder 🗆	Cobb	le 🗆 G	ravel	□ Sand	坚 Silt/ clay	/ □ Organic
Observations										
Riparian Zone Preser	nt: 🗆 Ye	es	I	10						
Vegetation Layers: (check all that apply)	☑ Tr	ees	v s	Saplings/Shru	ıbs	☑ Herbs				
Dominant Bank Vege Fraxinus nigra, Rume	tation (list): us, Calam	nagrostis o	canadensis, A	Acer s	accharum, Ca	rex crinita, C	Slyceria striata.		
Aquatic Habitats (ex: Woody debris.	submerged or	emerged aqı	uatic vegetati	on, overhanging	banks/r	oots, leaf packs, la	rge submerged v	vood, riffles, deep po	pols, etc.):	
Aquatic Organisms (None.	Observed ((list):								
Disturbances (ex: live Logging activity.	stock acces	s, manure i	in waterbod	ly, waste discha	arge p	ipes):				
Observation Notes: Rain events occurred	prior to the	e time of s	survey.							



sasc033e_E (across)



sasc033e_N (downstream)



sasc033e_S (upstream)

Waterbody Date	a Sileet										
Description											
Project Name:						Date:			Waterbody S	Survey ID:	
Line 5 Relocation Pro	ect					2019-10-03			sasc034e		
State:		County/F	Parish:			USGS Wate	body Name:	•			
WI		Ashland				UNT to Bad	River				
Company:		Crew Me	mber Init	ials:		Latitude:			Longitude:		
Enbridge		BRG/JSV				46.309764			-90.665881		
Survey Type: (check one)	☐ Centerl	ine	✓ Re-Rou	ute		Access Road	□Facility	□Other			
Waterbody Type: (check one)	□ River	[☑ Stream	1		Ditch	☐ Swale	☐ Canal		Other	
Water Appearance: (check one)	☐ No Wa	ter [☑ Clear		□Т	Turbid	□Sheen on Surface	□Surfac	e Scum □/	Algal Mats [□Other
Existing Condition a: (check one)	☐ Highly	Functiona	al Stream	☑Mo	oderately	/ Functional S		☐ Functionally	Impaired Stre	eam	
Feature Description: (check one)	☐ Natural	[☐ Artificia	al, man-ma	de 🗹 I	Manipulated					
Flow Regime: (check one)	☑ Ephem	eral	☐ Intermi	ttent		Perennial	☐ Connect Swale	ting			
Sinuosity within Survey Corridor: (check one)	☐ Straigh	it [Meand	ering							
Measurements Depth of Water: 0.3	ft.	N/A□	Unknow	vn□ W at	ter Edge	e to Water Ed	ge: <u>2</u> ft.	N/A□]	OHWM Widt	:h: <u>2</u> ft.	
OHWM Indicator:	□ CI	ear line o	n bank	□Shelvir	ng	□Wrested v	egetation	 ✓Scouring		Water sta	ining
(check all that apply)		nt, matted		□Wrack	line	□Litter and o	lebris	□Abrupt plan	t community	□Soil chara	acteristic
Dominant Substrate: (check all that apply)	□ Ве	edrock	□ Воι	ulder	□ Cobb	le 🗆 G	iravel	 Sand	☐ Silt/ clay	y 🗆 Org	ganic
Observations											
Riparian Zone Preser	nt: 🗹 Ye	es	□ N	No							
Vegetation Layers: (check all that apply)	☑ Tr	ees	Ø 9	Saplings/SI	hrubs	✓ Herbs					
Dominant Bank Vege Persicaria sagittata, F	etation (list inus resind): osa, Scirp	us cyperir	nus, Juncu	s tenuis.						
Aquatic Habitats (ex: Riffles.	submerged or	emerged aqı	uatic vegetati	ion, overhangi	ing banks/ro	oots, leaf packs, la	rge submerged w	ood, riffles, deep po	ools, etc.):		
Aquatic Organisms (None.	Observed ((list):									
Disturbances (ex: live Logging activity.	stock acces	s, manure i	in waterbod	ly, waste dis	scharge pi	pes):					
Observation Notes: The feature is somew	hat erosior	al and ma	ay be fed	in part by (groundw	ater.					



sasc034e_E (downstream)



sasc034e_N (across)



sasc034e_W (upstream)

Water body Data Si	1001							
Description								
Project Name:				Date:			Waterbody S	urvey ID:
Line 5 Relocation Project				2019-10-03			sase016p	
State:	Count	y/Parish:		USGS Wate	rbody Name	:		
WI	Ashlaı	nd		UNT to Bad	River			
Company:	Crew	Member Initia	als:	Latitude:			Longitude:	
Enbridge	NTT/A	ARK/MAL		46.308893			-90.662110	
Survey Type:	enterline	☐ Re-Rout	te 🗆	Access Road	□Facility	□Other		
Waterbody Type: ☐ R	liver	☑ Stream		Ditch	☐ Swale	☐ Canal		Other
Water Appearance: ☐ N (check one)	o Water	✓ Clear		∃Turbid	☐Sheen or Surface	□Surfac	e Scum □A	lgal Mats □Other
Existing Condition ^a :	lighly Function	onal Stream	✓ Moderate	ely Functional S		☐ Functionally	Impaired Strea	ım
Feature Description: V N	atural	☐ Artificial	, man-made 🗆	Manipulated				
Flow Regime:	phemeral	☐ Intermit	tent 🗉	Perennial	☐ Connec Swale	ting		
Sinuosity within Survey Corridor:	traight	✓ Meande	ering					
Measurements								
Depth of Water: 1 ft.	N/A□	Unknowr	n□ Water Edo	ge to Water Ed	ge: 3 ft.	N/A□	OHWM Width	: <u>3</u> ft.
OHWM Indicator: (check all that apply)	☐ Clear line	e on bank	□Shelving	□Wrested v	egetation	□Scouring		□Water staining
(опеск ан тасарру)	✓Bent, material missing veg		□Wrack line	☑ Litter and	debris	☑ Abrupt plan change	t community	☐Soil characteristic change
Dominant Substrate: (check all that apply)	☐ Bedrock	☐ Boul	lder □ Cob	oble 🗆 C	Gravel	□ Sand	☑ Silt/ clay	□ Organic
Observations								
Riparian Zone Present:	☑ Yes	□ No	0					
Vegetation Layers: (check all that apply)	✓ Trees	□ Sa	aplings/Shrubs	 Herbs				
Dominant Bank Vegetatio Carex crinita, Carex bromo	n <i>(list)</i> : oides, Fraxini	us nigra, Betu	ıla alleghaniensi	S.				
Aquatic Habitats (ex: subme Overhanging vegetation.		l aquatic vegetatio	on, overhanging banks	s/roots, leaf packs, la	irge submerged v	vood, riffles, deep po	ools, etc.):	
Aquatic Organisms Observogs.	rved (list):							
Disturbances (ex: livestock Old logging roads throughout			v, waste discharge	pipes):				
Observation Notes: Feature associated with wa	ase050f and	wasc051f.						



sase016p_E (across)



sase016p_N (downstream)



sase016p_S (upstream)

Waterbody Date	JIICEL										
Description											
Project Name:						Date:			Waterbody	Survey ID:	
Line 5 Relocation Proj	ect					2019-09-27			sase014p		
State:		County/l	Parish:			USGS Wate	rbody Name:	•			
WI		Ashland				UNT to City	Creek				
Company:		Crew Me	ember Init	tials:		Latitude:			Longitude:		
Enbridge		KDF/AR	K			46.305464			-90.655086	i	
Survey Type: (check one)	✓ Centerl	ine	☐ Re-Ro	ute		Access Road	□Facility	□Other			
Waterbody Type: (check one)	☐ River		✓ Stream	1		Ditch	☐ Swale	☐ Canal		Other	
Water Appearance: (check one)	☐ No Wa	ter	☑ Clear			Turbid	□Sheen on Surface	□Surfac	e Scum 🗆	Algal Mats □Other	
Existing Condition ^a :	□ Highly	Function	al Stream	V	Moderately	y Functional S		☐ Functionally	Impaired Str	ream	
Feature Description:	✓ Natural		☐ Artificia	al, man-n	nade 🗆	Manipulated					
Flow Regime:	□ Ephem	eral	☐ Interm	ittent	V	Perennial	☐ Connect	ting			
Sinuosity within Survey Corridor: (check one)	□ Straigh	t	☑ Meand	dering			Owaic				
The perennial stream	is located	within we	t-mesic fo	orest, with	h trees linir	ng the banks.					
Measurements											
Depth of Water: 0.5	ft.	N/A□	Unknov	wn□ V	Vater Edge	e to Water Ed	ge: 8 ft.	N/A□	OHWM Wic	ith: <u>8</u> ft.	
OHWM Indicator: (check all that apply)	Ľ CI	ear line o	on bank	□Shel	lving	□Wrested v	egetation	☑ Scouring		□Water staining	
		nt, matte ing veget		□Wra	ck line	Litter and	debris	□Abrupt plan change	t community	✓ □Soil characteristic change	
Dominant Substrate: (check all that apply)	□Ве	edrock	□ Во	ulder	□ Cobb	le 🗆 C	Gravel	☑ Sand	☐ Silt/ cla	ay 🗆 Organic	
Observations											
Riparian Zone Presen	it: 🗹 Ye	es		No							
Vegetation Layers:	☑ Tr	ees	v (Saplings	/Shrubs	✓ Herbs					
Dominant Bank Vege Fraxinus nigra, Abies	tation <i>(list</i> balsamea,): Betula a	lleghanier	nsis, Car	ex intumes	scens, Carex	crinita, Carex	projecta, Athyr	ium filix-fem	nina.	
Aquatic Habitats (ex: s Submerged wood, ove	submerged or erhanging l	emerged ac oanks an	quatic vegetal d roots.	tion, overha	anging banks/r	oots, leaf packs, la	arge submerged w	ood, riffles, deep po	ools, etc.):		
Aquatic Organisms C Aquatic invertebrates.	bserved ((list):									
Disturbances (ex: lives None.	stock access	s, manure	in waterboo	dy, waste	discharge p	ipes):					
Observation Notes: Feature associated wi	th wetland	s wase02	25 and wa	se026.							



sase014p_NE (downstream)



sase014p_NW (across)



valer body bata Si	icci							
Description								
Project Name:				Date:			Waterbody S	Survey ID:
Line 5 Relocation Project				2019-10-05			sase017e	
State:	Cour	ty/Parish:		USGS Wate	rbody Name	:		
WI	Ashla	and		UNT to City	Creek			
Company:	Crew	Member Ini	tials:	Latitude:			Longitude:	
Enbridge	NTT/	ARK		46.304680			-90.651778	
Survey Type:	enterline	☐ Re-Ro	ute [□Access Road	□Facility	□Other		
Waterbody Type: □ R	River	☑ Strean	n [□ Ditch	☐ Swale	☐ Canal		Other
Water Appearance: ☐ N (check one)	lo Water	✓ Clear]	□Turbid	□Sheen on Surface	□Surfac	e Scum □ <i>A</i>	Algal Mats □Other
Existing Condition ^a :	Highly Funct	tional Stream	☐ Moderat	tely Functional S		Functionally	Impaired Stre	am
Feature Description: V N (check one)	latural	☐ Artificia	al, man-made [☐ Manipulated				
Flow Regime:	phemeral	☐ Interm	ittent [☐ Perennial	☐ Connection	ting		
Sinuosity within Survey Corridor:	straight	 Meand	dering					
	·		, , , , , , , , , , , , , , , , , , ,					
Measurements								
Depth of Water: 0.25 ft.	N/A□	Unknov	wn□ Water Ed	dge to Water Ed	l ge: 1 ft.	N/A□	OHWM Widtl	h: <u>1</u> ft.
OHWM Indicator: (check all that apply)	☐ Clear lin	ne on bank	Shelving	☑ Wrested v	egetation	✓Scouring		□Water staining
(спеск ан так арруу)	□Bent, ma		□Wrack line	□Litter and	debris	☑ Abrupt plan change	t community	□Soil characteristic change
Dominant Substrate: (check all that apply)	☐ Bedrock	с □ Во	ulder □ Co	obble 🗆 (Gravel	☐ Sand	坚 Silt/ clay	√ □ Organic
Observations								
Riparian Zone Present:	☑ Yes		No					
Vegetation Layers: (check all that apply)	☑ Trees		Saplings/Shrubs	☑ Herbs				
Dominant Bank Vegetatio Betula alleghaniensis, Alnu	on <i>(list)</i>: us incana, C	Carex crinita,	Cornus canaden	ısis, Juncus effu	sus.			
Aquatic Habitats (ex: subme Standing water throughout	rged or emerge portions of	ed aquatic vegeta the waterboo	tion, overhanging bank ly due to recent h	ks/roots, leaf packs, la heavy rainfall.	arge submerged v	ood, riffles, deep po	ools, etc.):	
Aquatic Organisms Obse None.	rved (list):							
Disturbances (ex: livestock None.	access, man	ure in waterbo	dy, waste discharge	e pipes):				
Observation Notes: None.								



sase017e_E (downstream)



sase017e_S (across)



sase017e_W (upstream)

Waterbody Data 3	HCCL								
Description									
Project Name:					Date:			Waterbody S	Survey ID:
Line 5 Relocation Project					2019-10-05			sase018i	
State:	Co	ounty/Parish	າ:		USGS Wate	body Name:			
WI	As	shland			UNT to City	Creek			
Company:	Cr	ew Member	Initials:		Latitude:			Longitude:	
Enbridge	N.	TT/ARK			46.304113			-90.648657	
Survey Type:	Centerline	e □ Re	-Route		Access Road	□Facility	□Other		
Waterbody Type: (check one)	River	☑ Str	eam		Ditch	☐ Swale	☐ Canal		Other
(check one)	No Water				Γurbid	☐Sheen on Surface	□Surfac	e Scum □A	Algal Mats □Other
Existing Condition ^a :	Highly Fu	inctional Stre	eam 🗓	Moderately	y Functional S	tream [Functionally	mpaired Stre	am
Feature Description:	Natural	☐ Art	tificial, man	-made 🗆	Manipulated				
Flow Regime:	Ephemer	al 🗹 Int	ermittent		Perennial	☐ Connect Swale	ing		
Sinuosity within Survey Corridor: (check one)	Straight	☑ M∈	eandering						
Measurements									
Depth of Water: 1 ft.	N/	A□ Unl	known□	Water Edge	to Water Ed	ge: <u>3</u> ft.	N/A□	OHWM Widt	n: <u>3</u> ft.
OHWM Indicator: (check all that apply)	☐ Clea	r line on ban	ık □Sh	lelving	□Wrested ve	egetation	□Scouring		□Water staining
(спеск ан шасарру)		matted, or vegetation	□Wı	rack line	☑ Litter and o	lebris	□Abrupt plan change	t community	☐Soil characteristic change
Dominant Substrate: (check all that apply)	□ Bedr	ock 🗆	Boulder	 Cobb	le 🗆 G	ravel	□ Sand	 Silt/ clay	∕ □ Organic
Observations									
Riparian Zone Present:	✓ Yes		□ No						
Vegetation Layers: (check all that apply)	✓ Tree	S	☑ Sapling	js/Shrubs	✓ Herbs				
Dominant Bank Vegetation Betula alleghaniensis, Car		1.							
Aquatic Habitats (ex: submi Riffles, woody debris.			egetation, over	hanging banks/r	oots, leaf packs, la	rge submerged w	ood, riffles, deep po	ools, etc.):	
Aquatic Organisms Observine.	erved (lis	<i>t)</i> :							
Disturbances (ex: livestock None.	caccess, r	nanure in wate	erbody, wast	e discharge pi	ipes):				
Observation Notes: Feature continues outside	survey c	orridor.							



sase018i_NE (downstream)



sase018i_NW (across)



sase018i_SW (upstream)

valerbody Data C	nicci									
Description										
Project Name:						Date:			Waterbody S	Survey ID:
Line 5 Relocation Project						2019-09-28			sasa063i	
State:		County/	Parish:			USGS Wate	rbody Name	:		
WI		Ashland				UNT to City	Creek			
Company:		Crew Me	ember Ini	tials:		Latitude:			Longitude:	
Enbridge		NTT/DG	SL .			46.302810			-90.647198	
Survey Type:	Centerl	ine	☐ Re-Ro	ute		Access Road	□Facility	□Other		
Waterbody Type:	River		✓ Strean	n		Ditch	☐ Swale	☐ Canal		Other
Water Appearance: (check one)	No Wat	er	☑ Clear			Turbid	☐Sheen on Surface	□Surfac	e Scum 🗆 🛭	Algal Mats □Other
Existing Condition ^a :	Highly	Function	al Stream	V	Moderatel	y Functional S		☐ Functionally	Impaired Stre	am
Feature Description:	Natural		☐ Artificia	al, man-r	made 🗆	Manipulated				
Flow Regime: (check one)	Ephem	eral	✓ Interm	ittent		Perennial	☐ Connection	ting		
Sinuosity within Survey Corridor:	Straigh	t	✓ Mean	dering						
Measurements										
Depth of Water: 0.2 ft	i.	N/A□	Unknov	wn 🗆 🛛 V	Vater Edge	e to Water Ed	ge: <u>4</u> ft.	N/A□	OHWM Widt	h: <u>6</u> ft.
OHWM Indicator: (check all that apply)	□ CI	ear line o	on bank	□She	lving	□Wrested v	egetation	Scouring		□Water staining
(спеск ан шагарру)		nt, matte ng veget		□Wra	ick line	☑ Litter and	debris	☑ Abrupt plan change	t community	☐Soil characteristic change
Dominant Substrate: (check all that apply)	□ Ве	drock	□ Во	ulder	☐ Cobb	ole 🗆 C	Gravel	□ Sand	坚 Silt/ clay	/ □ Organic
Observations										
Riparian Zone Present: (check one)	☑ Ye	es .		No						
Vegetation Layers: (check all that apply)	☑ Tr	ees		Saplings	/Shrubs	☐ Herbs				
Dominant Bank Vegetati Abies balsamea.	i on (list):								
Aquatic Habitats (ex: subn Open water.	nerged or	emerged ac	quatic vegeta	tion, overha	anging banks/i	roots, leaf packs, la	irge submerged w	vood, riffles, deep po	ools, etc.):	
Aquatic Organisms Obs Frogs.	erved (list):								
Disturbances (ex: livestoc ATV trail bisects the water					discharge p	pipes):				
Observation Notes: Associated with wetland v	wasa12	4f.								



sasa063i_NE (downstream)



sasa063i_SW (upstream)



sasa063i_W (across)

Waterbody Date	a Silect										
Description											
Project Name:						Date:			Waterbody	y Survey ID:	
Line 5 Relocation Pro	ject					2019-09-28			sasa064i		
State:		County/l	Parish:			USGS Wate	rbody Name	<u> </u>			
WI		Ashland				UNT to City	Creek				
Company:		Crew Me	ember Init	tials:		Latitude:			Longitude	:	
Enbridge		NTT/DG	iL			46.303093			-90.647708	8	
Survey Type: (check one)	✓ Centerl	ine	☐ Re-Ro	ute		Access Road	□Facility	□Other			
Waterbody Type:	☐ River		✓ Stream	า		Ditch	☐ Swale	☐ Canal		Other	
Water Appearance: (check one)	□ No Wa	ter	☐ Clear		□1	Turbid	☑ Sheen on Surface	□Surfac	e Scum [□Algal Mats	□Other
Existing Condition a: (check one)	☐ Highly	Function	al Stream		Moderately	/ Functional S		Functionally	Impaired St	tream	
Feature Description: (check one)	✓ Natural		☐ Artificia	al, man-m	nade 🗆 I	Manipulated					
Flow Regime: (check one)	□ Ephem	eral	✓ Interm	ittent		Perennial	☐ Connection	ting			
Sinuosity within Survey Corridor: (check one)	□ Straigh	t	✓ Meano	dering							
Intermittent drainage				op olde							
Measurements											
Depth of Water: 0.5	ft.	N/A□	Unknov	wn□ W	ater Edge	to Water Ed	ge: <u>1</u> ft.	N/A□	OHWM Wi	idth: <u>4</u> ft	
OHWM Indicator:	□ CI	ear line o	on bank	 Shel⁴	ving	□Wrested v	egetation	Scouring		⊈ Water s	taining
(check all that apply)		nt, matte		□Wrad	ck line	☑ Litter and o	debris	☑ Abrupt plan change	t communit	ty 坚 Soil cha change	aracteristic
Dominant Substrate: (check all that apply)	□В€	edrock	□ Во	ulder	□ Cobb	le 🗆 G	Gravel	□ Sand	☐ Silt/ cl	lay 🗹 (Organic
Observations											
Riparian Zone Preser	nt: 🗆 Ye	es	1	No							
Vegetation Layers: (check all that apply)	☑ Tr	ees		Saplings/	Shrubs	✓ Herbs					
Dominant Bank Vege Abies balsamea, Betu	etation (list la papyrife	ra, Popul	lus tremul	oides, Or	yzopsis as	sperifolia.					
Aquatic Habitats (ex: Open water.	submerged or	emerged ac	quatic vegetal	tion, overhar	nging banks/ro	oots, leaf packs, la	rge submerged w	ood, riffles, deep po	pols, etc.):		
Aquatic Organisms (None.	Observed ((list):									
Disturbances (ex: live None.	stock acces	s, manure	in waterboo	dy, waste o	discharge pi	ipes):					
Observation Notes: None.											



sasa064i_E (downstream)



sasa064i_S (across)



sasa064i_W (upstream)

Trate: Beay Bat	4 011000											
Description												
Project Name:						Date:				Waterbody S	urvey ID:	
Line 5 Relocation Pro	ect					2019-10-	17			sasd020e		
State:		County/	/Parish:			USGS Wa	aterbody Na	ıme:				
WI		Ashland	t			None						
Company:		Crew M	ember Ini	tials:		Latitude:				Longitude:		
Enbridge		MAL/AC	3G			46.30062	8			-90.647954		
Survey Type: (check one)	✓ Centerl	ine	☐ Re-Ro	ute		Access Roa	ad □Facilit	ty	□Other			
Waterbody Type: (check one)	☐ River		☑ Strean	n		Ditch	☐ Swa	le	□ Canal		Other	
Water Appearance: (check one)	✓ No War	ter	☐ Clear			Turbid	□Sheer Surface		□Surfac	e Scum □A	lgal Mats 🗆	Other
Existing Condition ^a : (check one)	☐ Highly	Function	nal Stream	ı 🗆	Moderate	ly Function			tionally	Impaired Strea	ım	
Feature Description: (check one)	☐ Natural					Manipulate	d					
Flow Regime: (check one)	☑ Ephem	eral	☐ Interm	ittent		Perennial	□ Con Swale	necting				
Sinuosity within Survey Corridor: (check one)	□ Straigh	nt	✓ Mean	dering								
Measurements												
Depth of Water:	ft.	N/A 🗹	Unknov	wn 🗆 🛝	Nater Edg	je to Water	Edge:	_ft.	N/A 🗹	OHWM Width	: <u>2</u> ft.	
OHWM Indicator:	□ Cl	ear line	on bank	□She	elving	□Wreste	d vegetation	□Sco	ouring		□Water stai	ning
(check all that apply)		ent, matte ing vege		□Wra	ack line	Ľ Litter ar	nd debris	□Abi chanç		t community	□Soil charad	cteristic
Dominant Substrate: (check all that apply)	□ Ве	edrock	□ Во	ulder	☐ Cob	ble [☑ Gravel	⊻ Sa	nd	□ Silt/ clay	□ Org	anic
Observations												
Riparian Zone Preser	nt: 🗆 Ye	es		No								
Vegetation Layers: (check all that apply)	☑ Tr	ees	v :	Saplings	s/Shrubs	☐ Hei	bs					
Dominant Bank Vege Acer saccharum, Betu												
Aquatic Habitats (ex: None.	submerged or	emerged a	quatic vegeta	tion, overh	anging banks	/roots, leaf pack	s, large submerç	ged wood, riffl	es, deep po	ools, etc.):		
Aquatic Organisms (None.	Observed ((list):										
Disturbances (ex: live None.	stock acces	s, manure	in waterbo	dy, waste	discharge	pipes):						
Observation Notes: The feature is fed by	sasb019e a	and term	inates in w	vetland v	wasd035f.							



sasd020e_NE (downstream)



sasd020e_S (across)



sasd020e_SW (upstream)

Waterbody Date	a Sileet										
Description											
Project Name:						Date:			Waterbod	y Survey ID:	
Line 5 Relocation Pro	ect					2019-10-17			sasd019e		
State:		County	/Parish:			USGS Wate	rbody Name	: :			
WI		Ashland	t			None					
Company:		Crew M	ember Ini	tials:		Latitude:			Longitude):	
Enbridge		MAL/AC	3G			46.300503			-90.64767	7	
Survey Type: (check one)	✓ Center	line	☐ Re-Ro	ute		Access Road	□Facility	□Other			
Waterbody Type:	□ River		☐ Stream	n	V	Ditch	☐ Swale	☐ Canal	[☐ Other	
Water Appearance: (check one)	✓ No Wa	ter	☐ Clear			Turbid	□Sheen or Surface	□Surfac	e Scum [□Algal Mats	□Other
Existing Condition ^a : (check one)	☐ Highly	Function	nal Stream	n 🗆 I	Moderatel	y Functional S		Functionally	Impaired S	tream	
Feature Description: (check one)	☐ Natura	I	✓ Artifici	al, man-n	nade 🗆	Manipulated					
Flow Regime: (check one)	☑ Ephem	neral	☐ Interm	ittent		Perennial	☐ Connec Swale	ting			
Sinuosity within Survey Corridor: (check one)	□ Straigh	nt	✓ Mean	dering							
Measurements											
Depth of Water:	ft.	N/A 🗹	Unkno	wn 🗆 🛮 🕦	ater Edge	e to Water Ed	lge: ft.	N/A	OHWM Wi	idth:21	ft.
OHWM Indicator:	□С	lear line	on bank	□Shel	ving	□Wrested v	egetation	Scouring		□Water	staining
(check all that apply)		ent, matte ing vege		□Wrad	ck line	☑ Litter and	debris	□Abrupt plan change	t communit	ty □Soil ch change	aracteristic
Dominant Substrate: (check all that apply)	□Ве	edrock	□ Во	ulder	☐ Cobb	ole 🗆 (Gravel	☑ Sand	☐ Silt/ c	clay 🗆	Organic
Observations											
Riparian Zone Preser	nt: 🗆 Ye	es		No							
Vegetation Layers: (check all that apply)	☑ Tr	rees	v	Saplings/	/Shrubs	☑ Herbs					
Dominant Bank Vege Acer saccharum, Que	etation (lisa rcus rubra	t): , Dryopte	eris interm	edia, Syn	nphyotrich	um laterifloru	m.				
Aquatic Habitats (ex: None.	submerged or	emerged a	quatic vegeta	tion, overha	nging banks/r	roots, leaf packs, l	arge submerged v	vood, riffles, deep po	ools, etc.):		
Aquatic Organisms (None.	Observed	(list):									
Disturbances (ex: live The feature is disturbed	stock acces ed by frequ	s, manure uent hum	in waterbo an activity	dy, waste o within th	discharge p e access r	ipes): road.					
Observation Notes: The feature is a tribut	ary to strea	am sasd(020e.								



sasd019e_E (upstream)



sasd019e_N (across)



sasd019e_W (downstream)

Waterbody Data Sheet

Tratorboay Bat	4 011000											
Description												
Project Name:						Date:			Waterbody S	urvey ID:		
Line 5 Relocation Pro	ect					2019-09-28	3		sasd001p			
State:		County	/Parish:			USGS Waterbody Name:						
WI		Ashland	d			City Creek						
Company:		Crew M	lember Ini	tials:		Latitude:			Longitude:			
Enbridge		AGG/M	IDL			46.302604			-90.641241			
Survey Type: (check one)	✓ Centerl	ine	☐ Re-Ro	ute		Access Road	I □Facility	□Other	•			
Waterbody Type:	□ River		✓ Stream	n		Ditch	☐ Swale	☐ Cana	I 🗆 (Other		
Water Appearance: (check one)	☐ No Wa	ter	☑ Clear			Turbid	☐Sheen or	n □Surfac	ce Scum	lgal Mats □Ot	ther	
Existing Condition ^a :	✓ Highly	Function	nal Stream	n 🗆	Moderate	ly Functional	Surface Stream	☐ Functionally	Impaired Strea	am		
Feature Description: (check one)	✓ Natural		☐ Artifici	al, man-	made 🗆	Manipulated						
Flow Regime: (check one)	☐ Ephem	eral	☐ Interm	ittent	V	Perennial	☐ Connec	cting				
Sinuosity within Survey Corridor: (check one)	□ Straigh	nt	✓ Mean	dering								
Measurements												
Depth of Water: 1.5	ft.	N/A□	Unkno	wn 🗆 🛚	Water Edg	e to Water E	dge : <u>6</u> ft	. N/A 🗆	OHWM Width	1: <u>8</u> ft.		
OHWM Indicator: (check all that apply)	☑ CI	ear line	on bank	□She	elving	□Wrested	vegetation	□Scouring		□Water stainin	g	
(oneon all that apply)		ent, matte ing vege		□Wra	ack line	□Litter and	l debris	□Abrupt plan	t community	□Soil character change	ristic	
Dominant Substrate: (check all that apply)	□ Ве	edrock	⊻ Во	ulder		ole 🗹	Gravel	☐ Sand	□ Silt/ clay	☐ Organi	ic	
Observations												
Riparian Zone Preser (check one)	nt: 🗹 Ye	es		No								
Vegetation Layers: (check all that apply)	☑ Tr	ees	V.	Saplings	s/Shrubs	☑ Herb	S					
Dominant Bank Vege Betula papyrifera, Bet	ula allegha	íniensis,		-								
Aquatic Habitats (ex: Pools, riffles.	submerged or	emerged a	aquatic vegeta	ition, overh	anging banks/	roots, leaf packs,	large submerged	wood, riffles, deep p	ools, etc.):			
Aquatic Organisms (Aquatic insects.	Observed ((list):										
Disturbances (ex: live None.	stock acces	s, manure	e in waterbo	dy, waste	e discharge p	pipes):						
Observation Notes: The perennial stream	flows throu	ugh fores	st dominate	ed by bi	rch trees al	long the bank	ss. The feature	e is natural and	high-quality.			



sasd001p_E (upstream)



sasd001p_NW (downstream)



sasd001p_S (across)

Waterbody Data Sheet

Traterseay Batt	. 0.1.000												
Description													
Project Name:						Date:			Waterbody St	ırvey ID:			
Line 5 Relocation Proj	ect					2019-09-28	3		sasd002p				
State:		County/l	Parish:			USGS Waterbody Name:							
WI		Ashland				UNT to City	UNT to City Creek						
Company:		Crew Me	ember Ini	tials:		Latitude:			Longitude:				
Enbridge		AGG/M	DL			46.302283			-90.640594				
Survey Type: (check one)	☑ Centerl	ine	☐ Re-Ro	ute		Access Road	□Facility	□Other	1				
Waterbody Type: (check one)	□ River		☑ Strean	n		Ditch	☐ Swale	☐ Cana	I 🗆 C	Other			
Water Appearance: (check one)	☐ No Wa	ter	☑ Clear			Turbid	□Sheen o Surface	n □Surfac	e Scum	gal Mats □Other			
Existing Condition ^a : (check one)	☐ Highly	Function	al Stream	V	Moderate	ly Functional		☐ Functionally	Impaired Strea	m			
Feature Description: (check one)	✓ Natural		☐ Artificia	al, man-		Manipulated							
Flow Regime: (check one)	☐ Ephem		☐ Interm		V	Perennial	☐ Connec Swale	cting					
Sinuosity within Survey Corridor: (check one)	☐ Straigh	t	✓ Mean	dering									
Measurements													
Depth of Water: 0.5	ft.	N/A□	Unknov	wn 🗆 🛚 \	Water Edg	e to Water E	dge : <u>3</u> ft	N/A 🗆	OHWM Width	: <u>4</u> ft.			
OHWM Indicator: (check all that apply)	☑ CI	ear line o	on bank	□She	elving	□Wrested	vegetation	Scouring		□Water staining			
(orosa an anacappy)	⊻ Be miss	nt, matte ing veget	ed, or tation	□Wra	ack line	□Litter and	debris	□Abrupt plan	t community	☐Soil characteristic change			
Dominant Substrate: (check all that apply)	□В€	edrock	☑ Bo	ulder	☑ Cobl	ole 🗹	Gravel	□ Sand	☐ Silt/ clay	□ Organic			
Observations													
Riparian Zone Preser	nt: 🗹 Ye	es		No									
Vegetation Layers: (check all that apply)	☑ Tr	ees		Saplings	s/Shrubs	☑ Herb	S						
Dominant Bank Vege Betula alleghaniensis,	tation (list Equisetur): n hyemal	e.										
Aquatic Habitats (ex: s Pools, riffles.	submerged or	emerged ac	quatic vegeta	tion, overh	anging banks/	roots, leaf packs,	large submerged	wood, riffles, deep p	ools, etc.):				
Aquatic Organisms C None.	bserved ((list):											
Disturbances (ex: live: None.	stock acces	s, manure	in waterboo	dy, waste	e discharge p	oipes):							
Observation Notes: The perennial stream	flows throu	ugh fores	t dominate	ed by ye	ellow birch.	It terminates	in City Creek						



sasd002p_E (across)



sasd002p_N (downstream)



sasd002p_S (upstream)

Survey Description	1								
Project Name:		Waterbody Nai	ne:		W	aterbody ID:		D	ate:
Line 5		Devils Creek			SA	ASV021p		1	0/9/2019
State:	County:		Company:		Crew N	Member Initials	: Pr	notos:	
Wisconsin	Ashland		VHB		DCR, C	CDC	3 ((US, DS	, CS)
Tract Number(s):			Nearest Mile	post	,	Associated W	etland ID)(s):	
WI-AS-536.000, WI-AS-5	593.000		28.5			WASV070			
Survey Type: (check one)	☐ Centerlin	ie ⊠Re-F	Route	□Access Road		□Other:			
Physical Attributes	3								
Stream Classification: (check one)	☐ Epheme	ral □Inter	mittent	⊠Perennial					
Waterbody Type: (check one)	River ⊠ St	ream 🗆 Dit	ch □ C	Canal 🗆 Othe	er:				
OHWM Width: 25 ft.	OHWM Indica (check all that appl		⊠ Clear lin	e □Shelvin	g	□Wrested vegetation	⊠S	couring	□Water staining
Height: 3ft. N/A□	⊠ Bent vegeta	t, matted, or miss tion	ing □Wrad	ck line □Litter ar debris	nd	□Abrupt plant community cha		oil chara	acteristic change
Width of Waterbody - T Bank to Top of Bank:		of Waterbody - of Slope:	Toe of Slope	Width of Waterbo	ody - W	ater Edge to	Depth of (Approx.)	Water:	
_ <u>40</u> ft.		<u>25</u> ft.			<u>23</u> ft.		N/A□		<u>1 ft</u> .
Sinuosity: (check one) ☐Straight	(Approx.,	velocity: 1fps		Bank height Right: Left:	_ <u>4</u> ft.		Bank slo	ppe Right: Left:	90 degrees
⊠Meanderir	14//\				<u>3</u> ft.				20 degrees
Qualitative Attribu	tes								
Water Appearance: (check one)	No water ⊠	Clear □Turb	-		face um	□Algal I	□Other:		
Substrate: (check all that apply) % of Substrate:	Bedrock □ Bo		le ⊠ Grave		☑ Silt/ c 10_%	lay □ Organi	c □ Ot	ther: %	
Width of Riparian Zone	(check all tha	t apply)	⊠ Trees	: ⊠ Sapl	ings/Sh	rubs:	⊠ Herbs	i	
<u>>500ft.</u> N/A□	Avg. DBH (approx.)	of Dominants:	<u>12</u> in.	_	<u>1</u> in.		<u>N/A</u> in.		
Dominant Bank Vegeta	, ,								
Alnus incana, Picea glau	ca, Ulmus americ	eana							
Aquatic Habitats (ex: su	bmerged or emerge	d aquatic vegetation	n, overhanging	banks/roots, leaf pac	ks, large	submerged wood	, riffles, de	ep pools)	:
submerged wood, overha	anging roots, riffle	es, pools							
Aquatic Organisms Ob	served (list):								
Coleoptera, Ephemeropt	era, caddisflies (2	2 species), Plecop	otera.						
T&E Species Observed None	(list):								
	ok access manus	in waterhady wast	discharge ni-	ne).					
Disturbances (ex: livestone) None	ick access, manure	iii waterbouy, waste	alsonarge pipe	:ə).					
Waterbody is: (check one)	⊠ Natural	□ Ari	ificial, man-m	ade □ Manipu	ulated				
Stream Quality ^a : (check one)	⊠ High	□ Мо	oderate	□ Low					

Waterbody ID: SASV021p

^a **High Quality:** Natural channel, natural vegetation extends at least one or two active channel widths on each side; banks stable and protected by roots; water color is clear to tea-colored; no barriers to fish movement; many fish cover types available; diverse and stable aquatic habitat; no disturbance by livestock or man.

Moderate Quality: Altered channel evidenced by rip-rap; natural vegetation extends 1/3-1/2 of the active channel width on each side; filtering function or riparian vegetation only moderately compromised; banks moderately unstable; water color is cloudy, submerged objects covered with greenish film; moderate odor; minor barriers to fish movement; fair aquatic habitat; minimum disturbance by livestock or man.

Low Quality: Channel is actively down cutting or widening; rip rap and channelization excessive; natural vegetation less than 1/3 of the active channel width on each side; lack of regeneration; filtering function severely compromised; banks unstable (eroding); water color is muddy and turbid; obvious pollutants (algal mats, surface scum, surface sheen); heavy odor; severe barriers to fish movement; little to no aquatic habitat; severe disturbance from livestock or man.

Notes:

Devils Creek (SASV021) bisects study area, flowing east to west.

Waterbody Sketch (Include north arrow, centerline, distance from centerline, data point location, survey boundary, and IDs of associated features)



Linear Waterbody Point Photographs Line 5 Wetland Delineation October 9, 2019, Page 1 of 2



Photograph 1: SASV021p, East, Upstream



Photograph 2: SASV021p, West, Downstream

Linear Waterbody Point Photographs Line 5 Wetland Delineation October 9, 2019, Page 2 of 2



Photograph 3: SASV021p, North, Across Stream

APPENDIX F

Waterbody Data Sheets
Part 16 of 24

Survey Description	on										
Project Name:		Waterbo	ody Name:				W	aterbody ID:			Date:
Line 5		Unname	d tributary	to Devils (Creek		S	ASV023i			10/10/2019
State:	County:		Co	mpany:			Crew I	Member Initials	: I	Photos:	
Wisconsin	Ashland		VH	В			DCR, 0	CDC	;	3 (US, D	S, CS)
Tract Number(s):			Ne	arest Mile	post			Associated W	etland	ID(s):	
WI-AS-400.000-628.00	0		28.	6				WASV073f			
Survey Type: (check one)	□С	enterline	⊠Re-Rout	te	□Ac	ccess Road	I	□Other:			
Physical Attribute	es										
Stream Classification: (check one)		phemeral	⊠Intermitt	ent	□P€	erennial					
Waterbody Type:											
	□River	⊠ Stream	☐ Ditch		Canal	☐ Oth	er:				
OHWM		Indicator:									
Width: 3_ft.	(спеск ал	l that apply)		⊠ Clear lin on bank	ie	□Shelvin	g	□Wrested vegetation	\boxtimes	Scouring	g □Water staining
Height:		☐Bent, matted, vegetation	or missing	□Wra	ck line	□Litter a debris	nd	□ Abrupt plant community cha		Soil cha	racteristic change
N/A□ Width of Waterbody -	Ton of	Width of Water	hody - Too	of Slope	Width	of Waterh	ody - W	later Edge to	Denth	of Water	**
Bank to Top of Bank:		to Toe of Slope		oi Siope		Edge:	ouy - W	ater Luge to	(Approx.)		•
<u>9</u> ft.			<u>3</u> ft.		N/A□		<u>3</u> ft.		N/A□		<u>3-4 in</u> .
Sinuosity:		Water velocity:				height			Bank s	lope	
(check one) ☐ Straight		(Approx.)				Right:				Right	:
		_	<u>0.5 f</u> ps			Left:	<u>4</u> ft.			Left	<u>90</u> degrees
⊠Meander	ing	N/A□				Leit.	<u>4</u> ft.			Leit	<u>20</u> degrees
Qualitative Attribu	utes	L									
Water Appearance:	4103										
(check one)	□No water	⊠Clear	□Turbid	□Sh on su	een ırface		rface cum	□Algal mats	□Other	:	
	Bedrock	⊠ Boulder □	Cobble	⊠ Grav	el 🛭	⊠ Sand	☐ Silt/ c	lay 🗆 Organi	с 🗆	Other:	
(check all that apply) % of Substrate:	%	<u>5</u> %	<u>30</u> %	<u>40</u> %	_	<u>25</u> %	%	%		%	
Width of Riparian Zon	o- Vo	getative Layers:	1								
		eck all that apply)			:	⊠ Sap	lings/Sh	nrubs:	⊠ Herl	os	
<u>100ft.</u> N/A□		g. DBH of Domi	nants:	<u>12</u> in.		-	<u>2 in.</u>		N/A_ir	٦.	
Dominant Bank Veget	ation (list):										
Abies balsamea, Betula	a alleghanie	nsis, Thuja occid	lentalis								
Aquatic Habitats (ex: s	submerged or	emerged aquatic v	regetation, ov	verhanging	banks/ro	oots, leaf pad	ks, large	submerged wood	, riffles,	deep pool	s):
Leaf packs, overhangin	g banks, riff	fles, pools									
Aquatic Organisms O	bserved (lis	st):									
None											
T&E Species Observe	d (list):										
None											
Disturbances (ex: lives	tock access,	manure in waterboo	dy, waste dis	charge pipe	es):						
None											
Waterbody is: (check one)	⊠N	atural	☐ Artifici	al, man-m	ade	☐ Manip	ulated				
Stream Quality ^a : (check one)	⊠H	igh	☐ Moder	ate		□ Low					

^a **High Quality:** Natural channel, natural vegetation extends at least one or two active channel widths on each side; banks stable and protected by roots; water color is clear to tea-colored; no barriers to fish movement; many fish cover types available; diverse and stable aquatic habitat; no disturbance by livestock or man.

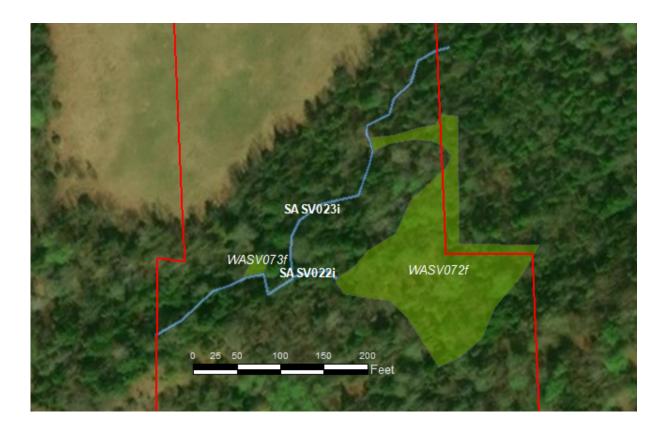
Moderate Quality: Altered channel evidenced by rip-rap; natural vegetation extends 1/3-1/2 of the active channel width on each side; filtering function or riparian vegetation only moderately compromised; banks moderately unstable; water color is cloudy, submerged objects covered with greenish film; moderate odor; minor barriers to fish movement; fair aquatic habitat; minimum disturbance by livestock or man.

Low Quality: Channel is actively down cutting or widening; rip rap and channelization excessive; natural vegetation less than 1/3 of the active channel width on each side; lack of regeneration; filtering function severely compromised; banks unstable (eroding); water color is muddy and turbid; obvious pollutants (algal mats, surface scum, surface sheen); heavy odor; severe barriers to fish movement; little to no aquatic habitat; severe disturbance from livestock or man.

Notes:

SASV023i flows across study area northeast to southwest. SASV022i connects to stream, and WASV073f is a small floodplain bench. Low flow present in stream after recent rains suggests stream is intermittent. Grade control, channel downcutting, substrate sorting, and riffle/pool sequences are all present in stream.

Waterbody Sketch (Include north arrow, centerline, distance from centerline, data point location, survey boundary, and IDs of associated features)



Linear Waterbody Point Photographs Line 5 Wetland Delineation October 10, 2019, Page 1 of 2



Photograph 1: SASV023i, Northeast, Upstream



Photograph 2: SASV023i, Southwest, Downstream

Linear Waterbody Point Photographs Line 5 Wetland Delineation October 10, 2019, Page 2 of 2



Photograph 3: SASV023i, West, Across Stream

Survey Descriptio	n										
Project Name:		Waterbo	dy Name:				W	aterbody ID:			Date:
Line 5		Unname	d tributary to	o Devils (Creek		SA	ASV022i			10/10/2019
State:	County:		Con	npany:			Crew N	Member Initials	: Р	hotos:	
Wisconsin	Ashland		VHE	3			DCR, C	CDC	3	(US, D	S, CS)
Tract Number(s):			Nea	rest Mile	post			Associated W	etland I	D(s):	
WI-AS-400.000-628.000)		28.6	5				WASV072			
Survey Type: (check one)	□ C	enterline	⊠Re-Route	e	□Ac	ccess Road		□Other:			
Physical Attribute	s										
Stream Classification: (check one)		phemeral	⊠Intermitte	ent	□P€	erennial					
Waterbody Type:											
	□River	⊠ Stream	☐ Ditch		Canal	☐ Othe	er:				
OHWM		Indicator:									
Width: 3_ft.	(спеск ан	l that apply)		l Clear lin n bank	ie	□Shelvin	g	□Wrested vegetation	\bowtie	Scourin	g □Water staining
Height:		☐Bent, matted, vegetation	or missing	□Wra	ck line	□Litter ar debris	nd	□ Abrupt plant community cha		Soil cha	racteristic change
N/A□ Width of Waterbody - ∃	Top of	Width of Waterk	ody - Too	of Slone	Width	of Waterh	ody - W	ater Edge to	Depth o	of Water	••
Bank to Top of Bank:		to Toe of Slope		oi Siope		Edge:	ouy II	ater Lage to	(Approx.)	or trace.	•
_ <u>4</u> ft.			<u>3</u> ft.		N/A□	-	<u>0.5</u> ft.		N/A□		<u>1 in</u> .
Sinuosity:		Water velocity:				height			Bank sl	оре	
(check one) ⊠Straight		(Approx.)				Right:				Right	:
		(<u>).25 f</u> ps			Left:	<u> </u>			Left	<u>80_</u> degrees
□Meanderi	ng	N/A□				Loit.	<u>3</u> ft.			Lon	80_degrees
Qualitative Attribu	ıtes										
Water Appearance:	_										
(check one)	□No water	⊠Clear	□Turbid	□Sh on su	een urface	□Sui sc	rface cum	□Algal mats	□Other:		
	Bedrock	☐ Boulder ▷	Cobble	⊠ Grav	el 🛭	Sand [□ Silt/ c	lay 🗆 Organi	с 🗆 С	Other:	
(check all that apply) % of Substrate:	%	%	<u>10</u> %	<u>60</u> %		<u>30</u> %	%	%		%	
Width of Riparian Zone	a. Va	getative Layers:									
		eck all that apply)		□ Trees	:	⊠ Sap	lings/Sh	rubs:	⊠ Herb	s	
<u>100ft.</u> N/A□		g. DBH of Domin	nants:	<u>8</u> in.		_	<u>2 in.</u>		N/A_in.		
Dominant Bank Vegeta	ation (list):										
Abies balsamea, Acer s	accharum,	Dryopteris interm	edia								
Aquatic Habitats (ex: s	ubmerged or	emerged aquatic v	egetation, ove	erhanging	banks/ro	oots, leaf pac	ks, large	submerged wood	, riffles, d	leep pool	s):
Leaf packs											
Aquatic Organisms Ob	served (lis	st):									
None											
T&E Species Observed	d (list):										
None											
Disturbances (ex: livest	ock access, i	manure in waterboo	ly, waste disc	harge pipe	es):						
None											
Waterbody is: (check one)	⊠ N	atural	☐ Artificia	ıl, man-m	ade	☐ Manip	ulated				
Stream Quality ^a : (check one)	⊠ H	igh	☐ Modera	ate		□ Low					

Waterbody ID:

SASV022i

^a **High Quality:** Natural channel, natural vegetation extends at least one or two active channel widths on each side; banks stable and protected by roots; water color is clear to tea-colored; no barriers to fish movement; many fish cover types available; diverse and stable aquatic habitat; no disturbance by livestock or man.

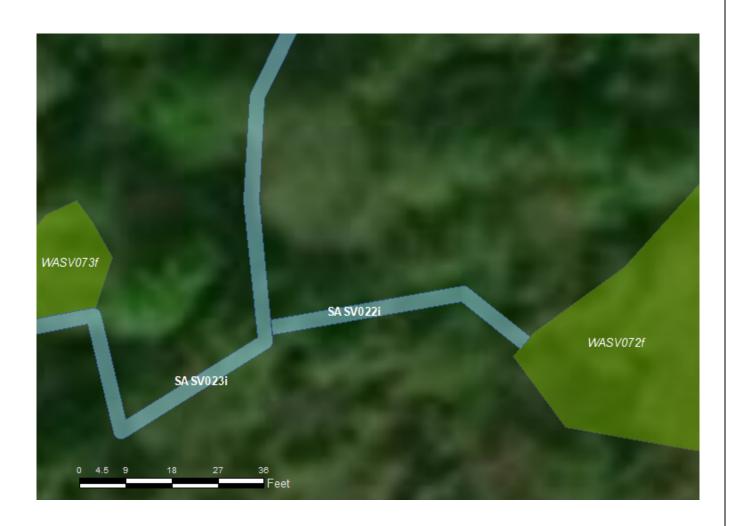
Moderate Quality: Altered channel evidenced by rip-rap; natural vegetation extends 1/3-1/2 of the active channel width on each side; filtering function or riparian vegetation only moderately compromised; banks moderately unstable; water color is cloudy, submerged objects covered with greenish film; moderate odor; minor barriers to fish movement; fair aquatic habitat; minimum disturbance by livestock or man.

Low Quality: Channel is actively down cutting or widening; rip rap and channelization excessive; natural vegetation less than 1/3 of the active channel width on each side; lack of regeneration; filtering function severely compromised; banks unstable (eroding); water color is muddy and turbid; obvious pollutants (algal mats, surface scum, surface sheen); heavy odor; severe barriers to fish movement; little to no aquatic habitat; severe disturbance from livestock or man.

Notes:

Stream originates from headwater wetland WASV072f at headcut and connects to SASV023i.

Waterbody Sketch (Include north arrow, centerline, distance from centerline, data point location, survey boundary, and IDs of associated features)



Linear Waterbody Point Photographs Line 5 Wetland Delineation October 10, 2019, Page 1 of 2



Photograph 1: SASV022i, South, Upstream



Photograph 2: SASV022i, North, Downstream

Linear Waterbody Point Photographs Line 5 Wetland Delineation October 9, 2019, Page 2 of 2



Photograph 3: SASV022i, West, Across Stream

Survey Description	1								
Project Name:		Waterbody Nar	ne:		W	aterbody ID:			Date:
Line 5		Unnamed tributa	ary to Devils C	Creek	S	ASV025p			10/12/2019
State:	County:		Company:		Crew I	Member Initials	: P	hotos:	
Wisconsin	Ashland		VHB		DCR, ((US, DS	S, CS)
Tract Number(s):			Nearest Mile	post		Associated W	etland I	D(s):	
WI-AS-400-636.000			29.00			WASV082f			
Survey Type: (check one)	☐ Centerline	e ⊠Re-F	Route	□Access Road		□Other:			
Physical Attributes	5								
Stream Classification: (check one)	□ Ephemer	al □Inter	mittent	⊠Perennial					
Waterbody Type: (check one)	River 🗵 Str	ream 🗆 Dite	ch 🗆 C	Canal	er:				
OHWM Width: <u>8</u> ft.	OHWM Indica (check all that apply		⊠ Clear lin	ie □Shelvinç	g	□Wrested vegetation	$\boxtimes S$	Scouring	□Water staining
Height: 3 ft. N/A□	⊠Bent, vegetat	, matted, or miss tion	ing □Wrad	ck line □Litter ar debris	nd	□ Abrupt plant community cha		Soil chai	racteristic change
Width of Waterbody - T Bank to Top of Bank:		of Waterbody - of Slope:	Toe of Slope	Width of Waterbo	ody - W	ater Edge to	Depth o	f Water	<u> </u>
<u>10</u> ft.		<u>6</u> ft.		N/A□	<u>6</u> ft.		N/A□		<u>6 in</u> .
Sinuosity:		velocity:		Bank height			Bank sl	оре	
(check one) ☐Straight	(Approx.)			Right:	4.6			Right:	
		<u>0.5</u> fps		Left:	<u>4</u> ft.			Left	<u>90</u> degrees :
⊠Meanderir	ng N/A□				<u>4</u> ft.				45 degrees
Qualitative Attribu	tes								
Water Appearance: (check one)	No water ⊠0	Clear □Turb	-		face um	□Algal mats	□Other:		
Substrate:	Bedrock ☐ Boo	ulder ⊠ Cobb	le 🗵 Grave	el ⊠ Sand □	□ Silt/ c	lay 🗆 Organi	с 🗆 С	Other:	
(check all that apply) % of Substrate:	_%%	<u> 5 </u> %	<u>60</u> %	35_%	%	%		%	
Width of Riparian Zone	: Vegetative	e Layers:							
200ft.		of Dominants:			ings/Sh <u>1</u> in.	rubs:	⊠ Herb		
N/A □ Dominant Bank Vegeta	(approx.)								
Acer saccharum, Fraxinu		ıbescens							
Aquatic Habitats (ex: su	bmerged or emerged	d aquatic vegetatio	n, overhanging	banks/roots, leaf pacl	ks, large	submerged wood	, riffles, d	eep pools	s):
Leaf packs, riffles/pools									
Aquatic Organisms Ob	served (list):								
Caddisflies									
T&E Species Observed	(list):								
None									
Disturbances (ex: livesto	ock access, manure i	in waterbody, waste	e discharge pipe	es):					
None									
Waterbody is: (check one)	⊠ Natural	□ Art	ificial, man-m	ade □ Manipu	ulated				
Stream Quality ^a : (check one)	⊠ High	□ Мо	derate	□ Low					

Waterbody ID: SASV025p

^a **High Quality:** Natural channel, natural vegetation extends at least one or two active channel widths on each side; banks stable and protected by roots; water color is clear to tea-colored; no barriers to fish movement; many fish cover types available; diverse and stable aquatic habitat; no disturbance by livestock or man.

Moderate Quality: Altered channel evidenced by rip-rap; natural vegetation extends 1/3-1/2 of the active channel width on each side; filtering function or riparian vegetation only moderately compromised; banks moderately unstable; water color is cloudy, submerged objects covered with greenish film; moderate odor; minor barriers to fish movement; fair aquatic habitat; minimum disturbance by livestock or man.

Low Quality: Channel is actively down cutting or widening; rip rap and channelization excessive; natural vegetation less than 1/3 of the active channel width on each side; lack of regeneration; filtering function severely compromised; banks unstable (eroding); water color is muddy and turbid; obvious pollutants (algal mats, surface scum, surface sheen); heavy odor; severe barriers to fish movement; little to no aquatic habitat; severe disturbance from livestock or man.

Notes:

Perennial stream bisects study area flowing east to west. Floodplain wetland WASV082f on south side of stream.

Waterbody Sketch (Include north arrow, centerline, distance from centerline, data point location, survey boundary, and IDs of associated features)



Linear Waterbody Point Photographs Line 5 Wetland Delineation October 12, 2019, Page 1 of 2



Photograph 1: SASV025p, East, Upstream



Photograph 2: SASV025p, West, Downstream

Linear Waterbody Point Photographs Line 5 Wetland Delineation October 12, 2019, Page 2 of 2



Photograph 3: SASV025p, North, Across Stream

Survey Description		adv Nama		Waterbady ID.		Data
Project Name:		oody Name:		Waterbody ID:		Date:
Line 5 Relocation Project	Unnam	ed tributary to Devil	s Creek	sasw016		10/8/2019
State:	County:	Company:		Crew Member Initials	: Photos:	
WI	Ashland	West		ES,WC	7930 38	3, 42-43,47-48
	Astriaria			,	•	5, 42-45,47-46
Tract Number(s):		Nearest Mile	epost	Associated V	/etland ID(s):	
WI-AS-400-665.000		29.0		none		
Survey Type: (check one)	☐ Centerline	⊠Re-Route	□Access Road	□Other:		
Physical Attributes	3					
Stream Classification: (check one)	□ Enhameral		⊠ Derenniel			
(Check one)	☐ Ephemeral	□Intermittent	⊠Perennial			
Waterbody Type: (check one)	River ⊠ Stream	□ Ditch □ 0	Canal Other	er:		
OHWM	OHWM Indicator:					
Width: 6ft.	(check all that apply)	☐ Clear lir on bank	ne □Shelvin	g ⊠Wrested vegetation	□Scourin	g □Water staining
Height: 1_ft. N/A□	⊠Bent, matted vegetation	, or missing □Wra	ck line □Litter ar debris	nd		aracteristic change
Width of Waterbody - T		rbody - Toe of Slope		ody - Water Edge to	Depth of Wate	r:
Bank to Top of Bank:	to Toe of Slop	e:	Water Edge:		(Approx.)	
<u>10</u> ft.		<u>12</u> ft.		<u>6</u> ft.		<u>10in</u> ft.
			N/A⊠		N/A 🗆	
Sinuosity: (check one)	Water velocity (Approx.)	:	Bank height		Bank slope	
□Straight	()	4 6	Right:	2 ft.	Right	t: 90 degrees
		1 fps	Left:	n.	Lef	
⊠Meanderin	ng N/A□			<u>4</u> ft.		90 degrees
Qualitative Attribu	tes					
Water Appearance:						
(check one)	No water ⊠ Clear	□Turbid □Sh on su		rface □Algal eum mats	☐Other:	
	Bedrock Boulder	☐ Cobble ☐ Grav	el 🗵 Sand 🛭	⊠ Silt/ clay □ Organ	ic Other:	
(check all that apply) % of Substrate:	%%	20 % 40	%	_40%	%%	
Width of Riparian Zone	: Vegetative Layers					
60 ft.	(check all that apply)	☐ Trees	: □ Sapl	lings/Shrubs:	☐ Herbs	
n N/A□	Avg. DBH of Dom (approx.)	16 <u>16</u>	_in	<u>5</u> in	<u> </u>	
Dominant Bank Vegeta	tion (list): herbaceous lay cer sachharum dominant t					
Aquatic Habitats (ev. su	bmerged or emerged aquatic	vegetation overhanging	hanks/roots leaf nac	ks large submerged wood	t riffles deen noo	le)•
	s, glides, riffles and pools		banks/100ts, icai pac	ks, large submerged wook	a, miles, deep poor	10).
Aquatic Organisms Ob	served (list):	·				
Fish present. Fast, dartin	,					
T&E Species Observed	(list):					
Flows west nearby SR 77	ck access, manure in waterb	ody, waste discharge pipe	es):			
Waterbody is:			. –			
(check one)	Natural	☐ Artificial, man-m	ade 🗆 Manipı	ulated		
Stream Quality ^a : (check one)	⊠ High	☐ Moderate	□ Low			

а	High Quality: Natural channel, natural vegetation extends at least one or two active channel widths on each side; banks stable and protected by roots; water color is clear to tea-colored; no barriers to fish movement; many fish cover types available; diverse and stable aquatic habitat; no disturbance by livestock or man.
	Moderate Quality: Altered channel evidenced by rip-rap; natural vegetation extends 1/3-1/2 of the active channel width on each side; filtering function or riparian vegetation only moderately compromised; banks moderately unstable; water color is cloudy, submerged objects covered with greenish film; moderate odor; minor barriers to fish movement; fair aquatic habitat; minimum disturbance by livestock or man.
	Low Quality: Channel is actively down cutting or widening; rip rap and channelization excessive; natural vegetation less than 1/3 of the active channel width on each side; lack of regeneration; filtering function severely compromised; banks unstable (eroding); water color is muddy and turbid; obvious pollutants (algal mats, surface scum, surface sheen); heavy odor; severe barriers to fish movement; little to no aquatic habitat; severe disturbance from livestock or man.
ı	Notes:
	vift flow, diverse instream habitats, banks mostly indicative of upland hydrology and topography, large boulders stream. Stream partially flows south out of assigned parcel
١	Naterbody Sketch (Include north arrow, centerline, distance from centerline, data point location, survey boundary, and IDs of associated features)

Waterbody ID: sasw016













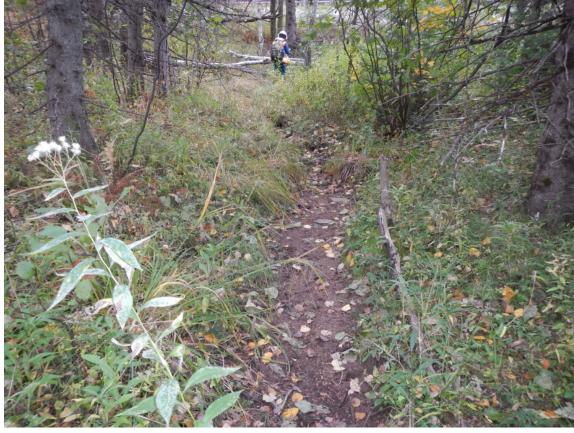
Survey Description	n										
Project Name:		Waterbo	ody Name:				W	laterbody ID:			Date:
Line 5 Relocation Projec	t	Unname	ed roadside di	itches/s	swales		sa	asw019			10/12/2019
State:	County:		Compa	any:			Crew I	Member Initials	:	Photos:	
WI	Ashland		WEST				ES,WC			8096-98,	, 8103,05
Tract Number(s):	I.		Neares	st Milep	oost		I	Associated W	etland		
WI-AS-400-673.000			29.1					wasw043ss			
Survey Type: (check one)		Centerline	⊠Re-Route		□Aco	cess Road		□Other:			
Physical Attributes	e .										
Stream Classification:	J										
(check one)	⊠E	phemeral	□Intermittent		□Pei	rennial					
Waterbody Type: (check one)	River	☐ Stream	⊠ Ditch	□ Ca	anal	☐ Othe	er:				
OHWM	OHWN	/ Indicator:									
Width: _3_ft.		ll that apply)	☐ C on b	lear line bank	€	Shelvin	g	□Wrested vegetation		Scouring	g □Water staining
Height: <u>4in</u> ft. N/A□		⊠Bent, matted, vegetation	or missing	□Wrac	k line	⊠Litter ar debris	nd	□ Abrupt plant community cha		Soil cha	racteristic change
Width of Waterbody - T Bank to Top of Bank:	op of	Width of Water to Toe of Slope			Width o		ody - W	ater Edge to	Depth (Approx.)	of Water	r:
_ <u>4_</u> ft.			<u>4</u> ft.		N/A⊠		ft.		N/A⊠		ft.
Sinuosity:		Water velocity:			Bank h	eight			Bank s	lope	
(check one) ☐ Straight		(Approx.)				Right:				Right	
			fps			Left:	<u>0.75</u> ft	•		Left	<u>80</u> degrees t:
⊠Meanderin	ng	N/A⊠				-	<u>0.75</u> ft				90 degrees
Qualitative Attribu	tes										
Water Appearance:											
(check one)	No water	□Clear	□Turbid	□She on sur		□Sui so	rface cum	□ Algal mats	□Othei	r: mud	
	Bedrock	☐ Boulder ☐	Cobble	Grave	l 🗆	Sand	⊠ Silt/ c	clay 🛭 Organi	с 🗆	Other:	
(check all that apply) % of Substrate:	%	%	%	%		%	<u>85</u> %	15	<u></u> %	%	
Width of Riparian Zone		getative Layers:									
<u>45ft</u> .		eck all that apply) g. DBH of Domi	nanta.	Trees:		☐ Sap	lings/Sh		☐ Her		
N/A□		prox.)		12	_in.	_	2	_in	-	_in.	
Dominant wetland vege Abies balsamea, Scirpus		, Juncus effusis									
Aquatic Habitats (ex: su	bmerged or	r emerged aquatic v	regetation, overha	anging b	anks/roo	ots, leaf pac	ks, large	submerged wood	, riffles,	deep pool	s):
No water or flow											
Aquatic Organisms Ob	served (lis	st):									
None observed											
T&E Species Observed	(list):										
Disturbances (ex: livesto	ock access,	manure in waterboo	dy, waste discha	rge pipes	s):						
Ditch and swale drain adj	acent SR	77									
Waterbody is: (check one)	□ N	latural	☐ Artificial, r	man-ma	ide	⊠ Manip	ulated				
Stream Quality ^a : (check one)	□н	ligh				□ Low					

а	High Quality: Natural channel, natural vegetation extends at least one or two active channel widths on each side; banks stable and protected by roots; water color is clear to tea-colored; no barriers to fish movement; many fish cover types available; diverse and stable aquatic habitat; no disturbance by livestock or man.
	Moderate Quality: Altered channel evidenced by rip-rap; natural vegetation extends 1/3-1/2 of the active channel width on each side; filtering function or riparian vegetation only moderately compromised; banks moderately unstable; water color is cloudy, submerged objects covered with greenish film; moderate odor; minor barriers to fish movement; fair aquatic habitat; minimum disturbance by livestock or man.
	Low Quality: Channel is actively down cutting or widening; rip rap and channelization excessive; natural vegetation less than 1/3 of the active channel width on each side; lack of regeneration; filtering function severely compromised; banks unstable (eroding); water color is muddy and turbid; obvious pollutants (algal mats, surface scum, surface sheen); heavy odor; severe barriers to fish movement; little to no aquatic habitat; severe disturbance from livestock or man.
ı	Notes:
Εp	hemeral, dry swale and ditch that drain wasw043ss and adjacent roadside, SR 77
	Martanhardta Obartah (r. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1.
	Naterbody Sketch (Include north arrow, centerline, distance from centerline, data point location, survey boundary, and IDs of associated features)

Waterbody ID: sasw019

sasw019





sasw019





Survey Description						I- .
Project Name:		ody Name:		Waterbody	ID:	Date:
Line 5 Relocation Project	Unname	ed tributary to Devils	Creek	sasw020		10/12/2019
State:	County:	Company:		Crew Member In	itials: Photos	3:
WI	Ashland	WEST		ES, WC	8150, 8	3151, 8153
Tract Number(s):		Nearest Mile	post	Associate	ed Wetland:	
WI-AS-400-673.000		29.3	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,			
Survey Type:		20.0		wasw045	İ .	
(check one)	□ Centerline	⊠Re-Route	□Access Road	□Other:		
Physical Attributes						
Stream Classification: (check one)	☐ Ephemeral	⊠Intermittent	□Perennial			
Waterbody Type:	River ⊠ Stream	□ Ditch □ C	anal □ Othe	or:		
(enesit ene)	Niver \(\triangle \) Siteain		anai 🗆 Otne	ii.		
OHWM Width: 4 ft.	OHWM Indicator: (check all that apply)	☐ Clear line on bank	e □Shelvinç	g ⊠Wreste vegetatio		ng □Water staining
Height:	⊠Bent, matted, vegetation	or missing □Wrac	k line □Litter ar debris	nd □Abrupt communit		naracteristic change
N/A 🗆					, ,	
Width of Waterbody - To Bank to Top of Bank:	op of Width of Waterl to Toe of Slope	oody - Toe of Slope :	Width of Waterbo Water Edge:	ody - Water Edge	to Depth of Wat	er:
<u>15</u> ft.	_	<u>6</u> ft.		<u>5</u> ft.		<u>6 in</u> ft.
Sinuosity:	Water velocity:		N/A□ Bank height		Bank slope	
(check one)	(Approx.)		Right:		Rig	ht:
□Straight	0	<u>.33</u> fps		<u> </u>		60 degrees
⊠Meandering	g N/A□		Left:	5 ft.	Le	eft: 90 degrees
Overlitetive Attaileve						-
Qualitative Attribute Water Appearance:	es					
	No water ⊠Clear	□Turbid □She on su		face □Algal um mats	□Other: mud	
	Bedrock □ Boulder □	☑ Cobble ☐ Grave	el 🗆 Sand 🗈	□ Silt/ clay □ O	rganic	
(check all that apply) % of Substrate:	%	<u>20</u> %%	%	<u>65</u> % <u>1</u> 5	<u>5</u> %%	
Width of Riparian Zone:						
<u>45ft</u> .	(check all that apply)	⊠ Trees:	⊠ Sapl	ings/Shrubs:		
	Avg. DBH of Domin (approx.)	nants: <u>12</u>	in	<u>2</u> in.	in.	
Dominant vegetation: Ostrya virginiana saplings	, Fraxinus trees, Carex bro	moides, Glyceria stria	ıta			
	omerged or emerged aquatic vols, logjams, moss, tussoo			ks, large submerged	wood, riffles, deep po	ools):
Aquatic Organisms Obs	erved (list):					
None observed	orrea (noi).					
T&E Species Observed	(list):					
Disturbances (ex. livestor	ck access, manure in waterboo	tv. waste discharge nine	e)·			
,	nd wasw045f. Logged, felle		,	utlet with wasw045	f	
Waterbody is:						
(check one) Stream Quality a:		☐ Artificial, man-ma	ade 🗆 Manipu	ulated		
(check one)	⊠ High	☐ Moderate	□Low			

а	High Quality: Natural channel, natural vegetation extends at least one or two active channel widths on each side; banks stable and protected by roots; water color is clear to tea-colored; no barriers to fish movement; many fish cover types available; diverse and stable aquatic habitat; no disturbance by livestock or man.
	Moderate Quality: Altered channel evidenced by rip-rap; natural vegetation extends 1/3-1/2 of the active channel width on each side; filtering function or riparian vegetation only moderately compromised; banks moderately unstable; water color is cloudy, submerged objects covered with greenish film; moderate odor; minor barriers to fish movement; fair aquatic habitat; minimum disturbance by livestock or man.
	Low Quality: Channel is actively down cutting or widening; rip rap and channelization excessive; natural vegetation less than 1/3 of the active channel width on each side; lack of regeneration; filtering function severely compromised; banks unstable (eroding); water color is muddy and turbid; obvious pollutants (algal mats, surface scum, surface sheen); heavy odor; severe barriers to fish movement; little to no aquatic habitat; severe disturbance from livestock or man.
ı	Notes:
W	ater flows west, tussock fringe on banks of stream approximately 5f width of wetland fringe on banks
1	Naterbody Sketch (Include north arrow, centerline, distance from centerline, data point location, survey boundary, and IDs of associated features)

Waterbody ID: sasw020

sasw020





sasw020



APPENDIX F

Waterbody Data Sheets
Part 17 of 24

Linear Waterbody Data Sheet

Survey Description	n							
Project Name:		Waterbody			Wat	erbody ID:		Date:
Line 5 Relocation Project	t	Unnamed to	ributary to Monti	real Creek	sasv	w017		10/8/2019
State:	County:		Company:		Crew Me	mber Initials:	Photos:	
WI	Ashland		WEST		ES/WC		7976,79,	82,85,86
Tract Number(s):			Nearest Mile	epost	Α	ssociated We	etland ID(s):	
WI-AS-400-724.000			29.6, 29.7		W	vasw036f, w	asw037ss/	
Survey Type: (check one)	□ Cent	terline ⊠E	Re-Route	□Access Road	, r	□Other:		
,		teriirie 🔼 r	Ne-Noule	_Access Road	, L	Jotner.		
Physical Attribute: Stream Classification: (check one)	_ □ Ephe	emeral ⊠I	ntermittent	□Perennial				
Waterbody Type: (check one)	River	☑ Stream □	Ditch 🗆 C	Canal □ Oth	er:			
OHWM Width:	OHWM In (check all tha		☐ Clear lir on bank	ne ⊠Shelvin		□Wrested vegetation	□Scouring	g □Water staining
4ft. Height:1.51	<u>.</u> ⊠I	Bent, matted, or n		ck line □Litter a debris	nd 🗆	Abrupt plant ommunity char		racteristic change
N/A□ Width of Waterbody - T	op of Wi	idth of Waterbod	y - Toe of Slope	Width of Waterb	ody - Wat	er Edge to [Depth of Water	·:
Bank to Top of Bank:		Toe of Slope:	,	Water Edge:	•	(4	Approx.)	
<u>8</u> ft.		4	ft.	N/A□	<u>4</u> _ft.	N		10 in
Sinuosity: (check one)		ater velocity:		Bank height		E	Bank slope	
⊠Straight		0.33	fps	Right:	<u>3</u> ft.		Right	: 90 degrees
□Meanderii	ng N/	A□		Left:	4 ft.		Left	: 90 degrees
Qualitative Attribu	tos			_				
Water Appearance:	162							
(check one)	No water	⊠Clear □1	Γurbid □Sh on sι		rface cum	□Algal □ mats	Other: mud	
Substrate:	Bedrock 🗵	Boulder ⊠ C	obble ⊠ Grav	el □ Sand □	☐ Silt/ cla	y 🗌 Organic	☐ Other:	
% of Substrate:	%	<u>5</u> %;	<u>30</u> % <u>25</u>	%%	30	%%	%	
Width of Riparian Zone		ative Layers:	□ Trees	: □ Sap	olings/Shru	ıbs:	□ Herbs	
<u>45</u> _ft. N/A□	Avg. I	DBH of Dominan	401	in	in		in.	
Dominant vegetation: A		*	moides, Alnus,ind	ana, Osmunda cla	aytoniana			
Aquatic Habitats (ex: su	ıbmerged or em	nerged aquatic vege	tation, overhanging	banks/roots, leaf pac	cks, large su	ıbmerged wood,	riffles, deep pool	s):
Leaf litter, riffles, runs, p	ools, logjams,	, moss, tussocks						
Aquatic Organisms Ob	served (list):							
None observed								
T&E Species Observed	l (list):							
none								
Disturbances (ex: livesto	ock access, mai	nure in waterbody, v	vaste discharge pipe	es):				
none								
Waterbody is: (check one)	⊠ Natu	ıral 🗆	Artificial, man-m	ade 🗆 Manip	ulated			
Stream Quality ^a : (check one)	⊠ High	ı 🗆	Moderate	□ Low				

u	roots; water color is clear to tea-colored; no barriers to fish movement; many fish cover types available; diverse and stable aquatic habitat; no disturbance by livestock or man.
	Moderate Quality: Altered channel evidenced by rip-rap; natural vegetation extends 1/3-1/2 of the active channel width on each side; filtering function or riparian vegetation only moderately compromised; banks moderately unstable; water color is cloudy, submerged objects covered with greenish film; moderate odor; minor barriers to fish movement; fair aquatic habitat; minimum disturbance by livestock or man.
	Low Quality: Channel is actively down cutting or widening; rip rap and channelization excessive; natural vegetation less than 1/3 of the active channel width on each side; lack of regeneration; filtering function severely compromised; banks unstable (eroding); water color is muddy and turbid; obvious pollutants (algal mats, surface scum, surface sheen); heavy odor; severe barriers to fish movement; little to no aquatic habitat; severe disturbance from livestock or man.
ı	Notes:
St	ream substrate varies upstream to downstream. Begins as cobble dominated ephemeral, dry swale upstream, then comes intermittent stream downstream with water and flow
١	Naterbody Sketch (Include north arrow, centerline, distance from centerline, data point location, survey boundary, and IDs of associated features)

Waterbody ID: sasw017









Linear Waterbody Data Sheet

Survey Description						
Project Name:		ody Name:		Waterbody ID:		Date:
Line 5 Relocation Project	Unname	ed stream/swale	S	sasw018	1	10/9/2019
State:	County:	Company:	Crew	Member Initials:	Photos:	
WI .	Ashland	WEST	ES, V	VC	8011, 801	8
Tract Number(s):		Nearest Milepos	t	Associated Wetland	I ID(s):	
WI-AS-400-724.000		29.8		wasw037ss, 037f	` ,	
Survey Type:						
(check one)	☐ Centerline	⊠Re-Route □	Access Road	□Other:		
Physical Attributes	3					
Stream Classification: (check one)	⊠ Ephemeral	□Intermittent □	Perennial			
Waterbody Type:						
	River Stream	☐ Ditch ☐ Cana	I ⊠ Other: sw	ale, forested		
OHWM Width:	OHWM Indicator: (check all that apply)	☐ Clear line	□Shelving	□Wrested □	Scouring	□Water
<u>2</u> ft.	(oneon all that apply)	on bank	□ Shelving	vegetation	_ Scouring	staining
Height:	⊠Bent, matted,	or missing □Wrack lir	ne □Litter and	☐ Abrupt plant ☐	∃Soil char	acteristic change
3in N/A□	vegetation		debris	community change		
Width of Waterbody - To Bank to Top of Bank:	op of Width of Water to Toe of Slope	body - Toe of Slope Wid	Ith of Waterbody - \ ter Edge:	Water Edge to Depth	of Water:	:
	to roe or stope		· ·	(-,-,-,-,-,-,-,-,-,-,-,-,-,-,-,-,-,-,-,	,	0.5 4
<u>45ft</u> ft.	_	4 ft. N/A	<u>10in</u> _	<u></u>		<u>0.5</u> ft.
Sinuosity:	Water velocity:		nk height	Bank	slope	
(check one) ⊠Straight	(Approx.)		Right:		Right:	
		<u>0</u> fps	<u>5.5 ft</u> Left:	<u></u>	Left:	degrees
□Meanderin	g N/A□			_ft.	2011.	30 degrees
Qualitative Attribut	es					
Water Appearance:						
(check one)	No water □Clear		□Surface e scum	□Algal □Othe mats	er: mud	
Substrate:	Bedrock ☐ Boulder [☐ Cobble ☐ Gravel	☐ Sand ☐ Silt/	clay ⊠ Organic □	Other:	
(check all that apply) % of Substrate:						
% of Substrate:	%	%%	%20	<u>80</u> %	%	
Width of Riparian Zone:	Vegetative Layers (check all that apply)		- O!:/0	Nh mulh a	-d	
<u>45</u> ft.	Avg. DBH of Domi	□ Trees: nants: 18 in.	☐ Saplings/S . 2	Shrubs: \square Hei in. $_$	in.	
N/A 🗆	(approx.)	<u>10</u> III.				
Dominant Bank Vegetat	, ,					
Dryopteris carthusiana, C	arex bromoides					
Aquatic Habitats (ex: sub	omerged or emerged aquatic v	regetation, overhanging bank	s/roots, leaf packs, larg	e submerged wood, riffles,	deep pools):
Leaf litter, logs, sticks						
Aquatic Organisms Obs	served (list):					
T0 5 0	(f'=1)-					
T&E Species Observed	(IISt):					
Disturbances (av. livesto	ok access, manura in waterbo	dy wasta disabarga pipas):				
Distuibances (ex. iivesto	ck access, manure in waterbo	uy, waste uischarge pipes):				
Waterbody is:						
(check one)	Natural	☐ Artificial, man-made	☐ Manipulated			
Stream Quality ^a :	□ Hiah	⊠ Moderate	□low			

_	roots; water color is clear to tea-colored; no barriers to fish movement; many fish cover types available; diverse and stable aquatic habitat; no disturbance by livestock or man.
	Moderate Quality: Altered channel evidenced by rip-rap; natural vegetation extends 1/3-1/2 of the active channel width on each side; filtering function or riparian vegetation only moderately compromised; banks moderately unstable; water color is cloudy, submerged objects covered with greenish film; moderate odor; minor barriers to fish movement; fair aquatic habitat; minimum disturbance by livestock or man.
	Low Quality: Channel is actively down cutting or widening; rip rap and channelization excessive; natural vegetation less than 1/3 of the active channel width on each side; lack of regeneration; filtering function severely compromised; banks unstable (eroding); water color is muddy and turbid; obvious pollutants (algal mats, surface scum, surface sheen); heavy odor; severe barriers to fish movement; little to no aquatic habitat; severe disturbance from livestock or man.
1	Notes:
- 0	rested ephemeral swale connecting wasw037ss and wasw037f. Puddles present, minimal flow west. Fair aquatic habitat
١	Waterbody Sketch (Include north arrow, centerline, distance from centerline, data point location, survey boundary, and IDs of associated features)

Waterbody ID: sasw018





Waterbody Data Si	icci								
Description									
Project Name:					Date:			Waterbody S	Survey ID:
Line 5 Relocation Project					2019-10-05			sasd010p	
State:	Cou	nty/Parish:			USGS Water	body Name			
WI	Ash	and			UNT to Mont	real Creek			
Company:	Crev	v Member Ini	tials:		Latitude:			Longitude:	
Enbridge	AGC	S/OTG			46.329194			-90.637805	
Survey Type:	enterline	☐ Re-Ro	oute	□А	ccess Road	□Facility	□Other		
Waterbody Type: □ R	liver	☑ Strear	n		Ditch	☐ Swale	☐ Canal		Other
Water Appearance: ☐ N (check one)	lo Water	☑ Clear		ПΤ	urbid	☐Sheen on Surface	□Surfac	e Scum 🗆	Algal Mats □Other
Existing Condition ^a :	lighly Fund	ctional Stream	n 🗹 Modera	ately	Functional S		☐ Functionally	Impaired Stre	am
Feature Description: V N	latural	☐ Artifici	al, man-made		Manipulated				
Flow Regime:	phemeral	☐ Interm	nittent	V F	Perennial	☐ Connect	ting		
Sinuosity within Survey Corridor:	traight	⊻ Meand	dering						
Small perennial feature ass									
Measurements									
Depth of Water: 0.75 ft.	N/A	Unkno	wn□ Water E	dge	to Water Ed	ge: <u>5</u> ft.	N/A□	OHWM Widt	h: <u>5</u> ft.
OHWM Indicator: (check all that apply)	☑ Clear li	ne on bank	□Shelving		□Wrested ve	getation	□Scouring		□Water staining
(спеск ан так арруу)	✓Bent, m missing v		□Wrack line		□Litter and o	lebris	□Abrupt plan change	t community	☐Soil characteristic change
Dominant Substrate: (check all that apply)	□ Bedroo	k □ Bo	oulder C	obbl	e □G	ravel	☑ Sand	☐ Silt/ clay	y □ Organic
Observations									
Riparian Zone Present:	☑ Yes		No						
Vegetation Layers: (check all that apply)	☐ Trees		Saplings/Shrubs	S	✓ Herbs				
Dominant Bank Vegetation Alnus incana, Carex crinita	on (list):								
Aquatic Habitats (ex: subme Pools, riffles, litter and deb	rged or emerg	ed aquatic vegeta	ation, overhanging ba	nks/ro	oots, leaf packs, la	rge submerged w	ood, riffles, deep po	ools, etc.):	
Aquatic Organisms Obse None.	rved (list):								
Disturbances (ex: livestock Flows under an ATV trail the			dy, waste discharç	ge pip	pes):				
Observation Notes: Feature is a small perennia	al stream th	nat flows throu	ugh an alder thio	cket.	The feature t	erminates in	Montreal Cree	k outside of th	ne survey corridor.



sasd010p_E (upstream)



sasd010p_S (across)



sasd010p_W (downstream)

Open Waterbody Data Sheet

Open waterboo	iy Data	Sileet								
Description										
Project Name:					Date:			Waterbody Su	ırvey ID:	
Line 5 Relocation Pro	ject				2019-10-14			oasd002		
State:		County/Par	rish:		USGS Wate	rbody Name	•			
WI		Ashland			None					
Company:		Crew Mem	ber Initials:		Latitude:			Longitude:		
Enbridge		MAL/AGG			46.335178			-90.656098		
Survey Type: (check one)	✓ Centerl	ine \square	Re-Route		ccess Road □Facility □Other					
Waterbody Type: (check one)	Stock F	ond 🗆	Natural Pond		Fishing Pond	☐ Lake	☐ Other			
Water Appearance: (check one)	☐ No Wa	ter 🗹	Clear	□Т	urbid	☐Sheen or Surface	□Surfac	e Scum □Al	gal Mats □Other	
Feature Quality: (check one)	□ High		Moderate	V	Low	Gariago				
Feature Description: (check one)	☐ Natural	V	Artificial, man-r	made 🗆 I	Manipulated					
The artificial pond is a	SSOCIALEU	wur weuanc	i wasu022 6 and	nocated ne	ear a resident	.ec.				
Measurements										
Depth of Water:	ft.	N/A□	Unknown 🗹							
OHWM Indicator: (check all that apply)	□ Cl	ear line on l	oank □She	lving	□Wrested v	egetation	Scouring		☑ Water staining	
		nt, matted, ng vegetation		ck line	☑ Litter and o	debris	□Abrupt plan change	t community	☐Soil characteristic change	
Dominant Substrate: (check all that apply)	□ Ве	edrock	☐ Boulder	□ Cobb	le 🗆 G	Gravel	□ Sand	 Silt/ clay	□ Organic	
Observations										
Riparian Zone Preser (check one)	nt: 🗹 Ye	es	□ No							
Vegetation Layers: (check all that apply)	□ Tr	ees	☑ Saplings	/Shrubs	坚 Herbs					
Dominant Bank Vege Typha sp., Scirpus cy	etation (list perinus, Ali): nus incana,	llex verticillata.							
Aquatic Habitats (ex: Open water.	submerged or	emerged aquat	ic vegetation, overha	anging banks/ro	oots, leaf packs, la	irge submerged v	vood, riffles, deep po	ools, etc.):		
Aquatic Organisms (Tadpoles.		, 								
Disturbances (ex: live Residential land use a	stock acces t the marg	s, manure in v in and high	vaterbody, waste invasive specie	discharge pi s cover.	pes):					
Observation Notes: None.										



oasd002_S



oasd002_SW



oasd002_W

Waterbody Date	a Silect										
Description											
Project Name:						Date:			Waterbody	/ Survey ID:	
Line 5 Relocation Pro	ect					2019-09-07			sasb006p		
State:		County/	Parish:			USGS Wate	rbody Name):			
WI		Ashland				Bad River					
Company:		Crew Me	ember Ini	tials:		Latitude:			Longitude:		
Enbridge		MAL/SA	M			46.336610			-90.654267	7	
Survey Type: (check one)	✓ Centerl	ine	☐ Re-Ro	ute		Access Road	□Facility	□Other			
Waterbody Type:	☑ River		☐ Strean	n		Ditch	☐ Swale	☐ Canal		Other	
Water Appearance: (check one)	☐ No Wa	ter	☐ Clear		Ø	Turbid	□Sheen or Surface	n □Surfac	e Scum [□Algal Mats	□Other
Existing Condition ^a :	☐ Highly	Function	al Stream	n 🗆	Moderatel	ly Functional S		Functionally	Impaired St	ream	
Feature Description: (check one)	✓ Natural		☐ Artificia	al, man-n	nade 🗆	Manipulated					
Flow Regime: (check one)	☐ Ephem	eral	☐ Interm	ittent	V	Perennial	☐ Connect	ting			
Sinuosity within Survey Corridor: (check one)	☐ Straigh	it	✓ Mean	dering							
Measurements											
Depth of Water:	ft.	N/A□	Unknov	wn 🗹 🛚 W	Vater Edg	e to Water Ed	l ge: <u>60</u> ft.	N/A□	OHWM Wie	dth: <u>60</u> f	t.
OHWM Indicator:	☑ CI	ear line o	on bank	□Shel	lving	□Wrested v	egetation	Scouring		□Water	staining
(check all that apply)		nt, matte		□Wra	ck line	☑ Litter and	debris	□Abrupt plan change	t community	y □Soil cha change	aracteristic
Dominant Substrate: (check all that apply)	□Ве	edrock	□ Во	ulder	☑ Cobb	ole 🗆 (Gravel	□ Sand	☑ Silt/ cl	lay 🗆	Organic
Observations											
Riparian Zone Preser	nt: 🗆 Ye	es		No							
Vegetation Layers:	☑ Tr	ees		Saplings/	/Shrubs	✓ Herbs					
Dominant Bank Vege Banks dominated by A	tation (list Acer sacch): arinum a	nd Phalar	is arundi	nacea.						
Aquatic Habitats (ex: Riffles, woody debris.	submerged or	emerged ac	quatic vegeta	tion, overha	anging banks/	roots, leaf packs, l	arge submerged v	wood, riffles, deep po	pols, etc.):		
Aquatic Organisms (None.	Observed ((list):									
Disturbances (ex: live Erosion, existing power	stock acces erline. Inva	s, manure sive spe	in waterboo cies cover	dy, waste along ba	discharge p anks.	pipes):					
Observation Notes: Disturbed stretch of th	e Bad Rive	er with re	elatively de	ensely ve	getated ba	anks.					



sasb006p_E (downstream)



sasb006p_NE (across)



sasb006p_NW (upstream)

Traterseay Batt	4 011000									
Description										
Project Name:						Date:			Waterbody St	ırvey ID:
Line 5 Relocation Proj	ect					2019-09-05			sasb001p	
State:		County	/Parish:			USGS Wate	erbody Name):		
WI		Ashland	d			Bad River				
Company:		Crew M	ember Ini	tials:		Latitude:			Longitude:	
Enbridge		MAL/SA	AM			46.335250			-90.651829	
Survey Type: (check one)	✓ Centerl	ine	☐ Re-Ro	ute		Access Road	□Facility	□Other		
Waterbody Type: (check one)	☑ River		☐ Strean	n		Ditch	☐ Swale	☐ Cana		Other
Water Appearance: (check one)	☐ No Wa	ter	☐ Clear		V	Turbid	☐Sheen or Surface	n □Surfac	e Scum	gal Mats □Other
Existing Condition a: (check one)	☐ Highly	Function	nal Stream		Moderatel	y Functional \$		☐ Functionally	Impaired Strea	m
Feature Description: (check one)			☐ Artificia			Manipulated				
Flow Regime: (check one)	☐ Ephem	eral	☐ Interm	ittent	V	Perennial	☐ Connection Connecti	ting		
Sinuosity within Survey Corridor: (check one)	□ Straigh	nt	✓ Mean	dering						
Measurements										
Depth of Water:	ft.	N/A□	Unknov	wn 🗹 🛛 V	Vater Edge	e to Water Ed	lge: <u>50</u> ft.	N/A□	OHWM Width	: <u>60</u> ft.
OHWM Indicator: (check all that apply)	☑ CI	ear line	on bank	☑She	lving	□Wrested v	egetation	□Scouring		☑ Water staining
(споск ан так арруу)		ent, matte ing vege		□Wra	ick line	☑ Litter and	debris	□Abrupt plan	t community	☐ Soil characteristic change
Dominant Substrate: (check all that apply)	□ Ве	edrock	□ Во	ulder	□ Cobb	ole 🗆 (Gravel	□ Sand	 Silt/ clay	☐ Organic
Observations										
Riparian Zone Preser (check one)	nt: 🗆 Ye	es	V	No						
Vegetation Layers: (check all that apply)	□ Tr	ees		Saplings	/Shrubs	☐ Herbs	i			
Dominant Bank Vege None.	etation (list	·):								
Aquatic Habitats (ex: Overhanging vegetation	submerged or on, woody	emerged a debris.	quatic vegeta	tion, overha	anging banks/r	oots, leaf packs, l	arge submerged v	wood, riffles, deep p	ools, etc.):	
Aquatic Organisms O None.	Observed ((list):								
Disturbances (ex: live Nearby berm.	stock acces	s, manure	in waterbo	dy, waste	discharge p	ipes):				
Observation Notes: None.										



sasb001p_NW (upstream)



sasb001p_S (downstream)



sasb001p_W (across)

Waterbody Data Si	icci							
Description								
Project Name:				Date:			Waterbody S	urvey ID:
Line 5 Relocation Project				2019-10-03			sasd007p	
State:	Count	y/Parish:		USGS Wate	rbody Name			
WI	Ashlar	nd		Montreal Cr	eek			
Company:	Crew I	Member Initia	als:	Latitude:			Longitude:	
Enbridge	AGG/0	OTG		46.332983			-90.635366	
Survey Type: (check one)	enterline	☐ Re-Rout	te [□Access Road	□Facility	□Other		
Waterbody Type: ☐ R	iver	☑ Stream	[□ Ditch	☐ Swale	☐ Canal		Other
Water Appearance:	o Water	☐ Clear	[☑Turbid	☐Sheen on Surface	□Surfac	e Scum □A	lgal Mats □Other
Existing Condition ^a : H	ighly Function	onal Stream		tely Functional S		☐ Functionally	Impaired Strea	am
Feature Description: V Na (check one)	atural	☐ Artificial	, man-made [☐ Manipulated				
Flow Regime:	phemeral	☐ Intermit	tent [☑ Perennial	☐ Connect Swale	ting		
Sinuosity within Survey Corridor:	traight	✓ Meande	ering					
Perennial river associated v								
Measurements								
Depth of Water: 4 ft.	N/A□	Unknow	n□ Water Ed	lge to Water Ed	ge: <u>25</u> ft.	N/A□	OHWM Width	n: <u>30</u> ft.
OHWM Indicator: (check all that apply)	☑ Clear line	e on bank	□Shelving	□Wrested v	egetation	□Scouring		□Water staining
.,,,,	☑Bent, mat missing veg		□Wrack line	□Litter and	debris	□Abrupt plan change	t community	☐Soil characteristic change
Dominant Substrate: (check all that apply)	☑ Bedrock	 Boul	der 🗹 Co	bble 🗹 (Gravel	☑ Sand	□ Silt/ clay	□ Organic
Observations								
	☑ Yes	□ No	0					
Vegetation Layers: (check all that apply)	☑ Trees	⊻ Sa	aplings/Shrubs	✓ Herbs				
Dominant Bank Vegetation Abies balsamea, Alnus inca	n <i>(list)</i> : ana, Pteridiu	m aquilinum.						
Aquatic Habitats (ex: submer Overhanging vegetation, po	oois.	aquatic vegetatio	n, overhanging bank	ks/roots, leaf packs, la	arge submerged w	rood, riffles, deep po	ools, etc.):	
Aquatic Organisms Obser None.	ved (list):							
Disturbances (ex: livestock None.	access, manu	re in waterbody	, waste discharge	e pipes):				
Observation Notes: The feature is a perennial s	stream that fl	lows through	forest. The ban	ks on the south	side of the fe	ature are expo	sed bedrock.	



sasd007p_NE (upstream)



sasd007p_SE (across)



sasd007p_SW (downstream)

vvaterbody bata	Officet									
Description										
Project Name:						Date:			Waterbody \$	Survey ID:
Line 5 Relocation Project	ct					2019-10-03			sasd006i	
State:		County/l	Parish:			USGS Wate	body Name			
WI		Ashland				UNT to Mon	real Creek			
Company:		Crew Me	ember Init	tials:		Latitude:			Longitude:	
Enbridge		AGG/OT	ΓG			46.334165			-90.633837	
Survey Type:	Centerl	ine	☐ Re-Ro	ute		Access Road	□Facility	□Other		
Waterbody Type: (check one)	River		✓ Stream	า		Ditch	☐ Swale	☐ Canal		Other
Water Appearance: (check one)	No Wa	ter	✓ Clear		_1	Γurbid	☐Sheen on Surface	□Surfac	e Scum 🔲	Algal Mats □Other
Existing Condition a: (check one)	1 Highly	Function	al Stream	□ Мо	derately	y Functional S	tream [☐ Functionally	Impaired Stre	eam
Feature Description: (check one)	1 Natural		☐ Artificia	al, man-mad	le 🗆	Manipulated				
Flow Regime: (check one)	Ephem	eral	✓ Interm	ittent		Perennial	☐ Connection Connection	ting		
Sinuosity within Survey Corridor: (check one)] Straigh	t	✓ Meano	dering						
Intermittent stream whic				. (,					
Measurements										
Depth of Water: 0.5	ft.	N/A□	Unknov	wn□ Wate	er Edge	to Water Ed	ge: 2 ft.	N/A□	OHWM Widt	t h: <u>3</u> ft.
OHWM Indicator: (check all that apply)	☑ CI	ear line o	on bank	□Shelvin	g	□Wrested v	egetation	□Scouring		□Water staining
(orion all that apply)		nt, matte		□Wrack li	ine	□Litter and o	lebris	□Abrupt plan change	t community	☐Soil characteristic change
Dominant Substrate: (check all that apply)	☑ Be	edrock	☑ Bo	ulder 🖺	2 Cobb	le 🗹 🤆	iravel	☑ Sand	□ Silt/ cla	y 🗆 Organic
Observations										
Riparian Zone Present:	□Y€	es	<u> </u>	No						
Vegetation Layers: (check all that apply)	☑ Tr	ees	Ø (Saplings/Sh	rubs	✓ Herbs				
Dominant Bank Vegeta Betula alleghaniensis, A	i tion (list Inus inca): ina, Abie	s balsame	ea, Dryopter	is interr	media, Pteridi	um aquilinum	l.		
Aquatic Habitats (ex: sub Pools, riffles, overhanging			quatic vegetal	tion, overhangin	g banks/ro	oots, leaf packs, la	rge submerged w	ood, riffles, deep po	ools, etc.):	
Aquatic Organisms Ob None.	served ((list):								
Disturbances (ex: livesto Culvert.	ock acces	s, manure	in waterboo	dy, waste disc	harge pi	ipes):				
Observation Notes: The feature is a natural	pictureso	que babb	ling brook	that flows th	hrough	mesic forest a	and into Mont	real Creek.		



sasd006i_N (across)



sasd006i_NW (upstream)



sasd006i_SE (downstream)

Linear Waterbody Data Sheet

Survey Descriptio	n											
Project Name:		Waterboo	dy Name):			W	aterbody ID:			Date:	
Line 5		Unnamed	tributary	to Scott Ta	aylor Cr	eek	SA	ASV010			9/25/2019	
State:	County:	•	C	ompany:			Crew N	Member Initials	: Ph	notos:		
Wisconsin	Ashland		VI	НВ			CS, CC		6 (Scouring		
Tract Number(s):	•		N	earest Mile	post		•	Associated W	etland ID)(s):		
WI-AS-231.00, WI-AS-2	32.000		26	6.9				WASV035, WA	ASV036			
Survey Type: (check one)	□ Centerl	ine [⊒Re-Roi	ute	□Ac	cess Road		□Other:				
Physical Attribute	s											
Stream Classification:	⊠ Ephem	eral [⊠Intermi	ittent	□Pe	rennial						
Waterbody Type: (check one)	River ⊠ S	Stream	☐ Ditch		Canal	☐ Othe	er:					
OHWM	OHWM India											
Width: 4.5_ft.	(check all that ap	рріу)			ie	□Shelvin	g	□Wrested vegetation	□S	courin		
Height: 2 ft. N/A□	⊠Bei veget	nt, matted, o ation	r missing	g □Wrad	ck line	□Litter ar debris	nd	□ Abrupt plant community cha		Soil cha	racteristic change	
Width of Waterbody - T Bank to Top of Bank:			ody - To	e of Slope	Width Water		ody - W	ater Edge to	•	Wate	r:	
Bank to Top of Bank.	10 10	e of Slope:			water	Euge.			(Арргох.)			
<u>6</u> ft.		_	<u>4 </u> ft.		N/A□		<u>4</u> ft.		N/A□		<u>6 in</u> .	
Sinuosity:		r velocity:			Bank h	eight			Bank slo	ре		
(check one) ☐Straight	(Appro.					Right:	0.6			Right		
		_	_fps			Left:	<u>3</u> ft.			Lef		
⊠Meanderii	ng N/A⊠	3					<u>5</u> ft.				70 degrees	
Qualitative Attribu	tes											
Water Appearance: (check one)	[]] No water □	☑Clear [□Turbid	□Sh		□Sui		3	□Other:			
Substrate:	Bedrock □ B	Boulder ⊠	Cobble	on su ⊠ Grave	ırface		:um ⊠ Silt/ c	mats :lay □ Organi	c □ Ot	thor:		
(check all that apply)	bediock b	odidei 🖂	Copple	⊠ Glave	5 1 ∟		∆ Siii/ C	iay 🗆 Olyani		uiei.		
% of Substrate:	%	%	<u>40</u> %	<u>50</u> %	· –	%	<u>10</u> %	%		%		
Width of Riparian Zone	Vegetati	ve Layers:		N -		□ 0	. (01					
300 ft.	Avg. DB	H of Domin	ants:	⊠ Trees 8_in.	:		lings/Sh <u>2</u> in.	rubs: _	⊠ Herbs in.			
N/A□ Dominant Bank Vegeta	(approx.)											
Carex bromoides, Betula		Acer saccha	arum									
Aquatic Habitats (ex: su	ubmerged or emerg	ged aquatic ve	getation,	overhanging	banks/ro	ots, leaf pac	ks, large	submerged wood	l, riffles, de	ep poo	s):	
pools, overhanging bank	s, overhanging r	roots										
Aquatic Organisms Ob	served (list):											
None												
T&E Species Observed	l (list):											
None												
Disturbances (ex: livesto	ock access, manur	e in waterbody	, waste d	ischarge pipe	es):							
None												
Waterbody is: (check one)	Natural		☐ Artific	cial, man-m	ade	☐ Manip	ulated					
Stream Quality ^a : (check one)	⊠ High		□ Mode	erate		□ Low						

Waterbody ID: SASV010

^a **High Quality:** Natural channel, natural vegetation extends at least one or two active channel widths on each side; banks stable and protected by roots; water color is clear to tea-colored; no barriers to fish movement; many fish cover types available; diverse and stable aquatic habitat; no disturbance by livestock or man.

Moderate Quality: Altered channel evidenced by rip-rap; natural vegetation extends 1/3-1/2 of the active channel width on each side; filtering function or riparian vegetation only moderately compromised; banks moderately unstable; water color is cloudy, submerged objects covered with greenish film; moderate odor; minor barriers to fish movement; fair aquatic habitat; minimum disturbance by livestock or man.

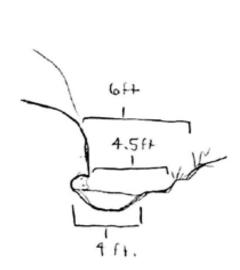
Low Quality: Channel is actively down cutting or widening; rip rap and channelization excessive; natural vegetation less than 1/3 of the active channel width on each side; lack of regeneration; filtering function severely compromised; banks unstable (eroding); water color is muddy and turbid; obvious pollutants (algal mats, surface scum, surface sheen); heavy odor; severe barriers to fish movement; little to no aquatic habitat; severe disturbance from livestock or man.

Notes:

Intermittent stream SASV010i flows north and dissipates into WASV035. No flowing water at time of survey, but water present in pools. Clear bed and bank and substrate sorting present in reach. A headcut at WASV036 signals an ephemeral/intermittent break in channel.

Ephemeral reach SASV010e has an OHWM 1ft wide and 6in depth. Top of bank is 1ft on right and 1ft on left with 90% bank slope on both sides. No water present in reach, and bed and bank are less clear in some areas. Substrate is 90% silt/clay and 10% gravel. No habitat for aquatic species.

Waterbody Sketch (Include north arrow, centerline, distance from centerline, data point location, survey boundary, and IDs of associated features)



EPH DATA:

OFINM-IfTW x 0.5 sides

TOB-IFT Sal-IFT, 900

No water

Bed/bank less clara

in are as.

No water.

Substrale-90% silt/clay

10% gravel.



Linear Waterbody Point Photographs Line 5 Wetland Delineation September 25, 2019, Page 1 of 4



Photograph 1: SASV010i, South, Upstream



Photograph 2: SASV010i, North, Downstream

Linear Waterbody Point Photographs Line 5 Wetland Delineation September 25, 2019, Page 2 of 4



Photograph 3: SASV010i, East, Across Stream



Photograph 4: SASV010i, North, Upstream, Headcut

Linear Waterbody Point Photographs Line 5 Wetland Delineation September 25, 2019, Page 3 of 4



Photograph 5: SASV010e, North, Downstream



Photograph 6: SASV010e, South, Upstream

Linear Waterbody Point Photographs Line 5 Wetland Delineation September 25, 2019, Page 4 of 4



Photograph 7: SASV010e, East, Across Stream

Linear Waterbody Data Sheet

Survey Description	n										
Project Name:		Waterbo	dy Name:				W	aterbody ID:			Date:
Line 5		Unname	d tributary t	o Scott Ta	aylor Cı	reek	Si	ASV009e		ę	9/24/2019
State:	County:	•	Coi	mpany:			Crew I	Member Initials	s: F	Photos:	
Wisconsin	Ashland		VHI	В			CS, CC		3	3 (US, DS	S, CS)
Tract Number(s):			Nea	arest Mile	post			Associated W	etland	ID(s):	
WI-AS-233.00			27.	3				WASV029			
Survey Type: (check one)	⊠ Cer	nterline	□Re-Rout	е	□Ac	cess Road		□Other:			
Physical Attributes	s										
Stream Classification: (check one)		nemeral	□Intermitte	ent	□P€	erennial					
Waterbody Type:											
	River	⊠ Stream	☐ Ditch		Canal	☐ Othe	er:				
OHWM		ndicator:	_								
Width: 2_ft.	(check all th	пат арріу)		Clear lin on bank	ie	□Shelvin	g	□Wrested vegetation		Scouring	□Water staining
Height: 1 ft. N/A□		Bent, matted, o	or missing	□Wra	ck line	□Litter and debris	nd	□Abrupt plant community cha		Soil cha	acteristic change
Width of Waterbody - T	op of W	/idth of Waterb	ody - Toe	of Slope	Width	of Waterb	ody - W	ater Edge to	Depth o	of Water	<u> </u>
Bank to Top of Bank:		Toe of Slope:		•	Water		-	-	(Approx.)		
_ <u>2</u> ft.		-	<u>2</u> ft.		N/A⊠		ft.		N/A⊠		<u>in</u> .
Sinuosity:	W	Vater velocity:			Bank	heiaht			Bank s	lope	
(check one) ☐ Straight		Approx.)				Right:				Right:	
		_	_fps			l offi	<u> 1 </u> ft.			l of	90 degrees
⊠Meanderir	ng N	I/A⊠				Left:	<u> </u>			Left	<u>90 degrees</u>
Qualitative Attribu	tos										
Water Appearance:											
(check one)	No water	□Clear	□Turbid	□Sh on st	een urface	□Su so	rface cum	□Algal mats	□Other	:	
	Bedrock	☐ Boulder ⊠	Cobble	⊠ Grav	el [☐ Sand □	⊠ Silt/ c	lay 🗆 Organi	с 🗆 (Other:	
(check all that apply) % of Substrate:	%	%	<u>40</u> %	<u>55</u> %	· _	%	<u>5</u> %	%		%	
Width of Riparian Zone	: Vege	etative Layers:									
	(check	(all that apply)		□ Trees	:	⊠ Sap	lings/Sh	rubs:	⊠ Herb	os	
_ <u>300</u> ft. N/A□	Avg. (appro	DBH of Domir	nants:	<u>10</u> in.		_	<u>1</u> in.	-	ir	n.	
Dominant Bank Vegeta	tion (list):										
Carex bromoides, Dryop	teris interme	edia, Arthyrium f	filix-femina								
Aquatic Habitats (ex: su	ıbmerged or e	merged aquatic ve	egetation, ov	erhanging	banks/ro	oots, leaf pac	ks, large	submerged wood	l, riffles, o	deep pools	s):
Leaf packs											
Aquatic Organisms Ob	served (list)	:									
None											
T&E Species Observed	(list):										
None											
Disturbances (ex: livesto	ock access, ma	anure in waterbod	ly, waste dis	charge pipe	es):						
Waterbody is: (check one)	⊠ Nat	ural	☐ Artificia	al, man-m	ade	☐ Manip	ulated				
Stream Quality ^a : (check one)	☐ Hig	h	⊠ Modera	ate		□ Low					

^a High Quality: Natural channel, natural vegetation extends at least one or two active channel widths on each side; banks stable and protected by roots; water color is clear to tea-colored; no barriers to fish movement; many fish cover types available; diverse and stable aquatic habitat; no disturbance by livestock or man.

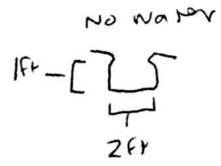
Moderate Quality: Altered channel evidenced by rip-rap; natural vegetation extends 1/3-1/2 of the active channel width on each side; filtering function or riparian vegetation only moderately compromised; banks moderately unstable; water color is cloudy, submerged objects covered with greenish film; moderate odor; minor barriers to fish movement; fair aquatic habitat; minimum disturbance by livestock or man.

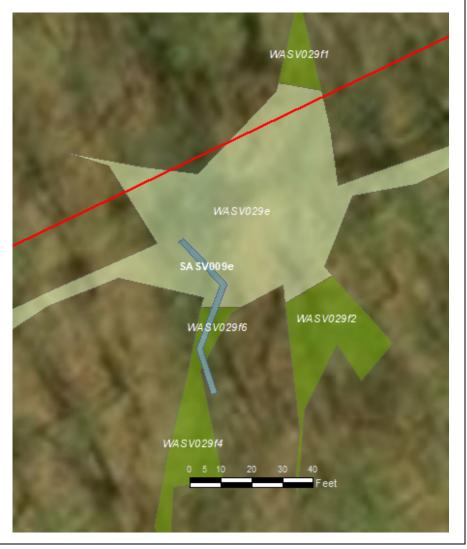
Low Quality: Channel is actively down cutting or widening; rip rap and channelization excessive; natural vegetation less than 1/3 of the active channel width on each side; lack of regeneration; filtering function severely compromised; banks unstable (eroding); water color is muddy and turbid; obvious pollutants (algal mats, surface scum, surface sheen); heavy odor; severe barriers to fish movement; little to no aquatic habitat; severe disturbance from livestock or man.

Notes:

Ephemeral drainage originating on hillslope within WASV029. Stream is lost once it flows into PEM portion of wetland. Drainage continues through roadbed and downslope but is no longer channelized.

Waterbody Sketch (Include north arrow, centerline, distance from centerline, data point location, survey boundary, and IDs of associated features)





Linear Waterbody Point Photographs Line 5 Wetland Delineation September 24, 2019, Page 1 of 2



Photograph 1: SASV009e, South, Upstream



Photograph 2: SASV009e, North, Downstream

Linear Waterbody Point Photographs Line 5 Wetland Delineation September 24, 2019, Page 2 of 2



Photograph 3: SASV009e, West, Across Stream

APPENDIX F

Waterbody Data Sheets
Part 18 of 24

Survey Description	1								
Project Name:		Waterbody Nar	ne:		W	aterbody ID:		Date:	
Line 5		Unnamed tributa	ary to Scott Ta	aylor Creek	SA	ASV008i		9/24/2019	
State:	County:		Company:		Crew N	Member Initials	: Pho	otos:	
Wisconsin	Ashland		VHB		CS, CC		`	JS, DS, CS)	
Tract Number(s):			Nearest Mile	post		Associated W	etland ID(s	s):	
WI-AS-233.00			27.3			WASV028, WA	\SV029		
Survey Type: (check one)	□ Centerline	e □Re-F	Route	□Access Road		□Other:			
Physical Attributes	3								
Stream Classification: (check one)	☐ Ephemer	al ⊠Inter	mittent	□Perennial					
Waterbody Type: (check one)	River ⊠ Str	eam 🗆 Dito	ch 🗆 C	Canal 🗆 Othe	er:				
OHWM Width:	OHWM Indicat (check all that apply		⊠ Clear lin	ie □Shelvino	g	□Wrested vegetation	□Sco	ouring	
Height: 6 in. N/A□	⊠Bent, vegetat	matted, or mission	ing □Wrad	ck line □Litter ar debris	nd	□ Abrupt plant community cha		il characteristic change	
Width of Waterbody - T Bank to Top of Bank:		of Waterbody - Tof Slope:	Toe of Slope	Width of Waterbo Water Edge:	ody - W		Depth of V (Approx.)	Vater:	
<u>6</u> ft.		<u>4</u> ft.		_ N/A□	<u>2-3 </u> ft.		N/A□	<u>1-2 in</u> .	
Sinuosity: (check one) ☐ Straight	(Approx.)	velocity: fps		Bank height Right: Left:	<u>4</u> ft. 1 ft.		Bank slop F	Right: 20 degrees Left: 60 degrees	
Qualitative Attribu	tes								
Water Appearance:		Clear □Turb	-		rface :um	□Algal [mats	□Other:		
Substrate: (check all that apply) % of Substrate:	Bedrock	ulder ⊠ Cobbl %40_%			⊠ Silt/ c _ <u>10</u> %	lay □ Organio	C □ Oth	er: _%	
Width of Riparian Zone <u>>500</u> ft. N/A□	(check all that	•	⊠ Trees 18 in.		lings/Sh _2_in.	irubs:	⊠ Herbs in.		
Dominant Bank Vegeta Impatiens capensis, Care		ula alleghaniens	is						
Aquatic Habitats (ex: su Leaf packs	bmerged or emerged	d aquatic vegetation	n, overhanging	banks/roots, leaf pac	ks, large	submerged wood	, riffles, deep	p pools):	
Aquatic Organisms Ob	served (list):								
1 Coleoptera, 1 water be	etle, 1 Ephemerop	otera							
T&E Species Observed	(list):								
None									
Disturbances (ex: livesto	ock access, manure i	n waterbody, waste	e discharge pipe	es):					
Waterbody is: (check one)		□ Δrt	ificial, man-m	ade □ Manipu	ulated				
Stream Quality ^a : (check one)	⊠ High		oderate	□ Low					

SASV008i

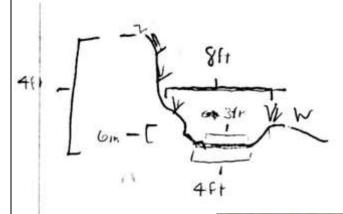
^a **High Quality:** Natural channel, natural vegetation extends at least one or two active channel widths on each side; banks stable and protected by roots; water color is clear to tea-colored; no barriers to fish movement; many fish cover types available; diverse and stable aquatic habitat; no disturbance by livestock or man.

Moderate Quality: Altered channel evidenced by rip-rap; natural vegetation extends 1/3-1/2 of the active channel width on each side; filtering function or riparian vegetation only moderately compromised; banks moderately unstable; water color is cloudy, submerged objects covered with greenish film; moderate odor; minor barriers to fish movement; fair aquatic habitat; minimum disturbance by livestock or man.

Low Quality: Channel is actively down cutting or widening; rip rap and channelization excessive; natural vegetation less than 1/3 of the active channel width on each side; lack of regeneration; filtering function severely compromised; banks unstable (eroding); water color is muddy and turbid; obvious pollutants (algal mats, surface scum, surface sheen); heavy odor; severe barriers to fish movement; little to no aquatic habitat; severe disturbance from livestock or man.

Notes:

No water was flowing through SASV008i at the time of survey, but there were standing pools of water throughout. A small section of the stream reach (approximately 20 feet) is borderline ephemeral; it was included as intermittent due to the presence of intermittent reaches both immediately upstream and downstream from it. Stream SASV008i originates at WASV029 and flows northward through WASV028, which acts as its floodplain.





Linear Waterbody Point Photographs Line 5 Wetland Delineation September 24, 2019, Page 1 of 2



Photograph 1: SASV008i, South, Upstream



Photograph 2: SASV008i, North, Downstream

Linear Waterbody Point Photographs Line 5 Wetland Delineation September 24, 2019, Page 2 of 2



Photograph 3: SASV008i, West, Across Stream

Survey Description	1							
Project Name:		Waterbody Na	me:		W	aterbody ID:		Date:
Line 5		Unnamed tribut	ary to Scott Ta	aylor Creek	SA	ASV012e		9/27/2019
State:	County:		Company:		Crew I	Member Initials	: Photos	:
Wisconsin	Ashland		VHB		CS, CC		3 (US, [OS, CS)
Tract Number(s):			Nearest Mile	post		Associated W	etland ID(s):	
WI-AS-235.000, WI-AS-2	233.000		27.4			WASV045		
Survey Type: (check one)		ne □Re-F	Route	□Access Road	i	□Other:		
Physical Attributes	5							
Stream Classification: (check one)	⊠ Epheme	eral □Inter	mittent	□Perennial				
Waterbody Type:								
	River ⊠ St	tream 🗆 Dit	ch 🗆 C	Canal	er:			
OHWM	OHWM Indica							
Width: 1_ft.	(check all that app	oly)		ne □Shelvin	ıg	□Wrested vegetation	□Scourir	ng □Water staining
Height: 1 ft. N/A□	⊠Ben vegeta	it, matted, or miss ation	ing □Wra	ck line □Litter a debris	nd	□ Abrupt plant community cha		aracteristic change
Width of Waterbody - T Bank to Top of Bank:		of Waterbody -	Toe of Slope	Width of Waterb Water Edge:	ody - W	ater Edge to	Depth of Wate	er:
Bank to Top of Bank.	10 106	e or Stope.		water Euge.			(πρριοκ.)	
<u>1</u> ft.		<u>1</u> ft.		N/A⊠	ft.		N/A⊠	<u>in</u> .
Sinuosity:		velocity:		Bank height			Bank slope	
(check one) ☐Straight	(Approx	z.)		Right:			Righ	
		fps		Left:	<u>3</u> ft.		<u>80</u> degrees ft:	
⊠Meanderir	lg N/A⊠				<u>1</u> ft.			90 degrees
Qualitative Attribu	tes							
Water Appearance: (check one)	No water □]Clear □Turb	-		rface	□Algal [□Other:	
					cum	mats		
Substrate:	Bedrock ☐ Bo	oulder Cobb	le □ Grav	el □ Sand □	⊠ Silt/ c	lay ⊠ Organi	c Other:	
% of Substrate:	%	%%	%	%	90_%	<u>10</u> %	%	
Width of Riparian Zone	: Vegetativ	/e Layers:	□ ▼	₩ 0	l' (Ol-			
_ <u>300</u> ft. N/A□	l'	H of Dominants:	⊠ Trees <u>6</u> in.		lings/Sh <u>1</u> in.	rubs:	⊠ Herbs <u>N/A</u> in.	
Dominant Bank Vegeta								
Carex scabrata, Betula a	, ,	axinus nigra						
Aquatic Habitats (ex: su	bmerged or emerge	ed aquatic vegetatio	n, overhanging	banks/roots, leaf pac	cks, large	submerged wood	, riffles, deep poo	ols):
None								
Aquatic Organisms Ob	served (list):							
None								
T&E Species Observed	(list):							
None								
Disturbances (ex: livesto	ck access, manure	in waterbody, waste	e discharge pipe	es):				
None								
Waterbody is: (check one)		□ Ar	tificial, man-m	ade 🗆 Manip	ulated			
Stream Quality ^a : (check one)	⊠ High	□ Mo	oderate	□ Low				

SASV012e

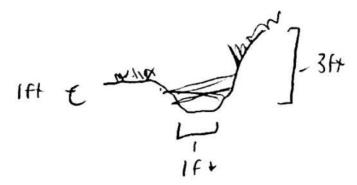
^a **High Quality:** Natural channel, natural vegetation extends at least one or two active channel widths on each side; banks stable and protected by roots; water color is clear to tea-colored; no barriers to fish movement; many fish cover types available; diverse and stable aquatic habitat; no disturbance by livestock or man.

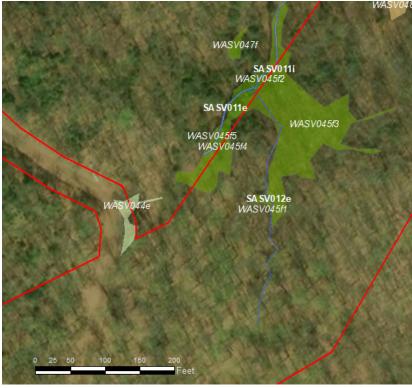
Moderate Quality: Altered channel evidenced by rip-rap; natural vegetation extends 1/3-1/2 of the active channel width on each side; filtering function or riparian vegetation only moderately compromised; banks moderately unstable; water color is cloudy, submerged objects covered with greenish film; moderate odor; minor barriers to fish movement; fair aquatic habitat; minimum disturbance by livestock or man.

Low Quality: Channel is actively down cutting or widening; rip rap and channelization excessive; natural vegetation less than 1/3 of the active channel width on each side; lack of regeneration; filtering function severely compromised; banks unstable (eroding); water color is muddy and turbid; obvious pollutants (algal mats, surface scum, surface sheen); heavy odor; severe barriers to fish movement; little to no aquatic habitat; severe disturbance from livestock or man.

Notes:

Ephemeral channel originates in WASV045 and drains downslope; connects with SASV011i directly before the ephemeral/intermittent break. No flowing water at time of survey. Stream is seepy and goes subterranean for short period before connecting to SASV011e. Roots of trees in streambed.





Linear Waterbody Point Photographs Line 5 Wetland Delineation September 27, 2019, Page 1 of 2



Photograph 1: SASV012e, East, Upstream



Photograph 2: SASV012e, West, Downstream

Linear Waterbody Point Photographs Line 5 Wetland Delineation September 27, 2019, Page 2 of 2



Photograph 3: SASV012e, South, Across Stream

Survey Description	์ า							
Project Name:		Waterbody Nan	ne:		W	aterbody ID:		Date:
Line 5		Unnamed tributa	ary to Scott Ta	aylor Creek	SA	ASV011		9/27/2019
State:	County:		Company:		Crew N	Member Initials	: Photo	os:
Wisconsin	Ashland		VHB		CS, CC		7 (US	, DS, CS ,Headcut)
Tract Number(s):			Nearest Mile	post		Associated W	etland ID(s):	
WI-AS-235.000			27.4			WASV045, WA	ASV046	
Survey Type: (check one)	⊠ Centerlin	e □Re-R	loute	□Access Road		□Other:		
Physical Attributes	5							
Stream Classification: (check one)	⊠ Ephemei	ral ⊠Inter	mittent	□Perennial				
Waterbody Type: (check one)	River 🗵 Stı	ream \square Dito	ch 🗆 C	Canal	er:			
OHWM Width: _4 ft.	OHWM Indica (check all that appl		⊠ Clear lir on bank	ne □Shelvin	g	□Wrested vegetation	□Scoui	ring □Water staining
Height: 1ft.	⊠Bent vegeta	, matted, or missi tion	ng □Wra	ck line □Litter ar debris	nd	□Abrupt plant community cha		haracteristic change
Width of Waterbody - T Bank to Top of Bank:		of Waterbody - 1 of Slope:	Toe of Slope	Width of Waterbo	ody - W	ater Edge to	Depth of Wa	ter:
		<u>3</u> ft.		N/A□	<u>3</u> ft.		N/A□	3-4 in.
Sinuosity:		velocity:		Bank height			Bank slope	
(check one) ☐Straight	(Approx.)			Right:	2.4		Rig	jht:
		<u>1</u> fps		Left:	<u>3</u> ft.		L	90 degrees
⊠Meanderin	lg N/A□				<u>3</u> ft.			
Qualitative Attribut	tes							
Water Appearance: (check one)	No water ⊠0	Clear □Turbi	-		rface	□Algal [mats	□Other:	
(check all that apply)	Bedrock ☐ Bo					lay □ Organi		
% of Substrate:	%	% <u>30</u> %	<u>50</u> %	%	<u>20</u> %	%	%	0
Width of Riparian Zone		•						
_ <u>>500</u> ft. N/A□	_	of Dominants:	⊠ Trees <u>6</u> in.	•	lings/Sh <u>1</u> in.	rubs:	⊠ Herbs <u>N/A</u> in.	
Dominant Bank Vegeta	(approx.)							
Carex scabrata, Betula a		er saccharum						
Aquatic Habitats (ex: su	bmerged or emerge	d aquatic vegetation	n, overhanging	banks/roots, leaf pac	ks, large	submerged wood	, riffles, deep p	ools):
pools, overhanging bank	_			•		Ü		,
Aquatic Organisms Obs	served (list):							
None								
T&E Species Observed	(list):							
None								
Disturbances (ex: livesto	ock access, manure	in waterbody, waste	discharge pipe	es):				
None								
Waterbody is: (check one)	Natural	□ Arti	ificial, man-m	ade 🗆 Manipı	ulated			
Stream Quality ^a : (check one)	⊠ High		derate	□ Low				

SASV011

^a High Quality: Natural channel, natural vegetation extends at least one or two active channel widths on each side; banks stable and protected by roots; water color is clear to tea-colored; no barriers to fish movement; many fish cover types available; diverse and stable aquatic habitat; no disturbance by livestock or man.

Moderate Quality: Altered channel evidenced by rip-rap; natural vegetation extends 1/3-1/2 of the active channel width on each side; filtering function or riparian vegetation only moderately compromised; banks moderately unstable; water color is cloudy, submerged objects covered with greenish film; moderate odor; minor barriers to fish movement; fair aquatic habitat; minimum disturbance by livestock or man.

Low Quality: Channel is actively down cutting or widening; rip rap and channelization excessive; natural vegetation less than 1/3 of the active channel width on each side; lack of regeneration; filtering function severely compromised; banks unstable (eroding); water color is muddy and turbid; obvious pollutants (algal mats, surface scum, surface sheen); heavy odor; severe barriers to fish movement; little to no aquatic habitat; severe disturbance from livestock or man.

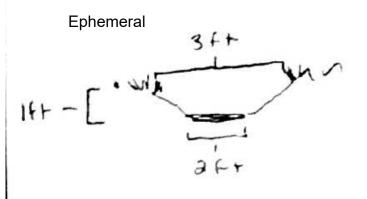
Notes:

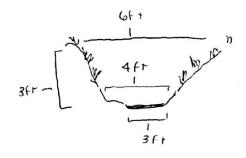
Stream originates within WASV045 as an ephemeral channel. A headcut signals the intermittent / ephemeral break. The intermittent portion of the channel shows signs of bank erosion, substrate sorting, strong bed and bank and reduced leaf litter in stream. Groundwater seeping from banks into stream. Section of stream is borderline perennial. Because the water is so low and the water is flowing very little, we think the current flow is due to recent rains and that in drier times, flow would be absent.

Ephemeral portion has weak bed and bank, leaf litter in channel, little substrate sorting, no riffle/pool sequence. The left bank and right bank are 1ft high with 30% slopes. Top of bank to top of bank is 3ft and toe of slope is 2ft width of water edge to water edge is 2ft. OHWM is 1ft tall and 2ft wide. Vegetations is missing and there is a clear line. Substrate is 90% organic and 10% gravel.



INTERMITTENT





Linear Waterbody Point Photographs Line 5 Wetland Delineation September 27, 2019, Page 1 of 4



Photograph 1: SASV011i, South, Upstream



Photograph 2: SASV011i, North, Downstream

Linear Waterbody Point Photographs Line 5 Wetland Delineation September 27, 2019, Page 2 of 4



Photograph 3: SASV011i, East, Across Stream



Photograph 4: SASV011i, South, Headcut

Linear Waterbody Point Photographs Line 5 Wetland Delineation September 27, 2019, Page 3 of 4



Photograph 5: SASV011e, East, Across Stream



Photograph 6: SASV011e, North, Downstream

Linear Waterbody Point Photographs Line 5 Wetland Delineation September 27, 2019, Page 4 of 4



Photograph 7: SASV011e, South, Upstream

Survey Description	1										
Project Name:		Waterbo	dy Name:				W	aterbody ID:			Date:
Line 5		Unnamed	I tributary t	o Scott Ta	aylor Cı	reek	SA	ASV015e			10/1/2019
State:	County:		Cor	mpany:			Crew N	Member Initials	s:	Photos:	
Wisconsin	Ashland		VHE	В			DCR, C	CDC	;	3 (US, D	S, CS)
Tract Number(s):	•		Nea	arest Mile	post			Associated W	etland	ID(s):	
WI-AS-237.000, WI-AS-2	238.000		28.3	3				WASV052			
Survey Type: (check one)	⊠ Cente	rline l	□Re-Rout	е	□Ac	cess Road		□Other:			
Physical Attributes	3										
Stream Classification: (check one)	⊠ Ephen	neral I	□Intermitte	ent	□P€	erennial					
Waterbody Type:											
	River	Stream	☐ Ditch		Canal	⊠ Othe	er: Line	ar Swale			
OHWM	OHWM Ind		_								
Width: 1_ft.	(check all that a	арріу)		☐ Clear lir on bank	ne	□Shelvin	g	□Wrested vegetation		Scouring	g □Water staining
Height: 0.5 ft.		ent, matted, o	r missing	□Wra	ck line	□Litter ar debris	nd	□ Abrupt plant community cha		Soil cha	racteristic change
N/A□ Width of Waterbody - T	on of Mid	th of Motorb	adv Taa	of Clans	Width	of Waterb	ody - W	ater Edge to	Donth	of Water	
Bank to Top of Bank:		oe of Slope:	ody - Toe	or Stope	Water		ouy - w	ater Euge to	(Approx.)		•
<u>2 f</u> t.		_	<u>1</u> ft.				<u>1</u> ft.				<u>2-3in</u> .
Cinconitor	W-4				N/A 🗆	h a laulu t			N/A□	lana.	
Sinuosity: (check one)	(Appr	er velocity: ox.)			Bank I	Right:			Bank s	Right	
⊠Straight		C). <u>5 f</u> ps			Kigiit.	<u> 1 ft. </u>			Kigiit	90 degrees
□Meanderin	lg N/A					Left:	1 ft.			Left	: 90 degrees
	·9 IN/A										o degrees
Qualitative Attribut	tes										
Water Appearance: (check one)	No water	⊠Clear	□Turbid	□Sh on st	een urface	□Sui	rface :um	□Algal mats	□Other	:	
Substrate:	Bedrock	Boulder	Cobble	☐ Grav	el 🏻	☑ Sand □	⊠ Silt/ c	lay □ Organi	с П	Other:	
(check all that apply) % of Substrate:	%	%	%	%		20%		, ,		%	
	/0	/0	/0	/6		<u>20</u> 70	<u>80</u> %	%		/0	
Width of Riparian Zone		tive Layers: that apply)		M T		□ Com □ Com	: /Ch				
<u>200ft.</u>		BH of Domin	ants:		•		lings/Sh <u>1</u> in.	irubs:			
N/A 🗆	(approx.)										
Dominant Bank Vegeta Salix bebbiana, Athyrium	, ,	raxinus nigra									
			antation ou	varbanaina	hanka/ra	esta lant nan	la larga	aubmargad waad	l riffloo	اممد مما	٥)،
Aquatic Habitats (ex: su	omerged or eme	rged aquatic ve	getation, ov	rernanging	Danks/rc	ots, lear pac	ks, large	submerged wood	i, rimes, e	aeep poor	s):
None											
Aquatic Organisms Obs	served (list):										
None											
T&E Species Observed	(list):										
None											
Disturbances (ex: livesto	ck access, manu	ire in waterbody	y, waste disc	charge pipe	es):						
Roadside											
Waterbody is: (check one)	□ Natura	al		al, man-m	ade	☐ Manip	ulated				
Stream Quality ^a : (check one)	☐ High		⊠ Modera	ate		□ Low					

SASV015e

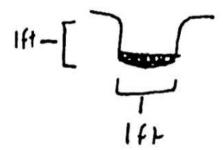
^a **High Quality:** Natural channel, natural vegetation extends at least one or two active channel widths on each side; banks stable and protected by roots; water color is clear to tea-colored; no barriers to fish movement; many fish cover types available; diverse and stable aquatic habitat; no disturbance by livestock or man.

Moderate Quality: Altered channel evidenced by rip-rap; natural vegetation extends 1/3-1/2 of the active channel width on each side; filtering function or riparian vegetation only moderately compromised; banks moderately unstable; water color is cloudy, submerged objects covered with greenish film; moderate odor; minor barriers to fish movement; fair aquatic habitat; minimum disturbance by livestock or man.

Low Quality: Channel is actively down cutting or widening; rip rap and channelization excessive; natural vegetation less than 1/3 of the active channel width on each side; lack of regeneration; filtering function severely compromised; banks unstable (eroding); water color is muddy and turbid; obvious pollutants (algal mats, surface scum, surface sheen); heavy odor; severe barriers to fish movement; little to no aquatic habitat; severe disturbance from livestock or man.

Notes:

Naturalized ditch-turned-swale alongside edge of rock wall. Swale only runs for about 30 feet through PSS portion of WASV052 to PEM portion, where it dissipates into roadside drainage feature. Swale has weak bed and bank, leaf litter in bed, clear drainage pattern, and roots across bank. Feature GPSed to capture channelization within wetland. Flowing water was present at time of survey due to recent rains.





Linear Waterbody Point Photographs Line 5 Wetland Delineation October 1, 2019, Page 1 of 2



Photograph 1: SASV015e North, Downstream



Photograph 2: SASV015e, South, Upstream

Linear Waterbody Point Photographs Line 5 Wetland Delineation October 1, 2019, Page 2 of 2



Photograph 3: SASV015e, West, Across Stream

Survey Description	<u> </u>										
Project Name:		Waterbo	dy Name:				Waterbody ID:				Date:
Line 5		Unnamed	d tributary t	o Scott Ta	aylor Cı	reek	S	ASV016i		•	10/1/2019
State:	County:		Cor	mpany:			Crew I	Member Initials	: P	hotos:	
Wisconsin	Ashland		VHE	3			DCR, 0	CDC	3	(US, D	S, CS)
Tract Number(s):			Nea	arest Mile	post			Associated W	etland II	O(s):	
WI-AS-238.00			28.3	3				WASV053			
Survey Type: (check one)	⊠ Cen	iterline	□Re-Rout	e	□Ac	cess Road		□Other:			
Physical Attributes	8										
Stream Classification: (check one)	□ Eph	emeral	⊠Intermitte	ent	□Pe	erennial					
Waterbody Type:											
	River	⊠ Stream	☐ Ditch		Canal	□ Othe	er:				
OHWM Width: 1 ft.	OHWM In			Clear lin	ie	□Shelvin	g	□Wrested vegetation		Scouring	g □Water staining
Height: 0.5 ft.		Bent, matted, o	or missing	□Wra	ck line	⊠Litter ar debris	nd	□Abrupt plant community cha		Soil cha	racteristic change
N/A□ Width of Waterbody - T	on of W	idth of Waterb	ody - Too	of Slope	Width	of Waterh	ody - W	ater Edge to	Depth o	f Water	•
Bank to Top of Bank:		Toe of Slope:	ouy - roe	oi Siope	Water		ouy II	ater Lage to	(Approx.)	· •••	•
_ <u>3</u> ft.		_	<u>1</u> ft.		N/A□		<u>1</u> ft.		N/A□		<u>2-3in</u> .
Sinuosity:	w	ater velocity:			Bank I	height			Bank slo	оре	
(check one) ☐ Straight	(A)	pprox.)				Right:				Right	:
		_ 0	<u>.25 f</u> ps			Left:	<u>1</u> ft.			Left	<u>70</u> degrees
⊠Meanderir	ng N/	/A□				20.1.	<u> </u>				
Qualitative Attribu	tes										
Water Appearance:											
(check one)	No water	⊠Clear	□Turbid	□Sh on su	een ırface	□Sui sc	rface cum	□Algal mats	□Other:		
	Bedrock [□ Boulder ⊠	Cobble	⊠ Grav	el 🛭	Sand [□ Silt/ c	lay 🗆 Organi	c 🗆 O	ther:	
(check all that apply) % of Substrate:	%	%	<u>40</u> %	<u>50</u> %	_	<u>10</u> %	%	%		%	
Width of Riparian Zone	: Vege	tative Layers:									
>500ft.	(check	all that apply) DBH of Domin	ants:	□ Trees ☐ in.	:		lings/Sh <u>1</u> in.	rubs:	⊠ Herbs	3	
N/A□	(approx			<u> </u>			<u>1 </u> 11 1.		<u>IN//-X</u> III.		
Dominant Bank Vegeta	` ′										
Carex scabrata, Fraxinus											
Aquatic Habitats (ex: su	bmerged or en	merged aquatic ve	egetation, ov	erhanging	banks/rc	oots, leaf pac	ks, large	submerged wood	l, riffles, de	eep pools	s):
Riffles, pools											
Aquatic Organisms Ob	served (list):										
1 frog; 2 Gerridae											
T&E Species Observed	(list):										
Polystichum braunii: S3,	ST										
Disturbances (ex: livesto	ock access, ma	anure in waterbod	y, waste disc	charge pipe	es):						
Access road for tree clear	ring										
Waterbody is: (check one)	⊠ Natu	ural	☐ Artificia	al, man-m	ade	☐ Manip	ulated				
Stream Quality ^a : (check one)	⊠ High	———— h	☐ Modera	ate		□ Low					

SASV016i

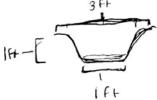
^a **High Quality:** Natural channel, natural vegetation extends at least one or two active channel widths on each side; banks stable and protected by roots; water color is clear to tea-colored; no barriers to fish movement; many fish cover types available; diverse and stable aquatic habitat; no disturbance by livestock or man.

Moderate Quality: Altered channel evidenced by rip-rap; natural vegetation extends 1/3-1/2 of the active channel width on each side; filtering function or riparian vegetation only moderately compromised; banks moderately unstable; water color is cloudy, submerged objects covered with greenish film; moderate odor; minor barriers to fish movement; fair aquatic habitat; minimum disturbance by livestock or man.

Low Quality: Channel is actively down cutting or widening; rip rap and channelization excessive; natural vegetation less than 1/3 of the active channel width on each side; lack of regeneration; filtering function severely compromised; banks unstable (eroding); water color is muddy and turbid; obvious pollutants (algal mats, surface scum, surface sheen); heavy odor; severe barriers to fish movement; little to no aquatic habitat; severe disturbance from livestock or man.

Notes:

SASV016i originates within WASV053 and flows northwest-ward outside of the study area. One individual of *Polystichum braunii* identified near stream headwaters. Upper portion of stream is braided and somewhat wider. Area immediately along streambank is dominated by hemlock, but greater wetland area is *Fraxinus*-dominated.





Linear Waterbody Point Photographs Line 5 Wetland Delineation October 1, 2019, Page 1 of 2



Photograph 1: SASV016i, North, Upstream



Photograph 2: SASV016i, South, Downstream

Linear Waterbody Point Photographs Line 5 Wetland Delineation October 1, 2019, Page 2 of 2



Photograph 3: SASV016i, West, Across Stream

Survey Description	า า							
Project Name:		Waterbody Nar	ne:		W	aterbody ID:		Date:
Line 5		Unnamed tributa	ary to Scott Ta	aylor Creek	SA	ASV013		9/28/2019
State:	County:		Company:		Crew N	Member Initials	: Phot	os:
Wisconsin	Ashland		VHB		CC, CF		,	S, DS, CS)
Tract Number(s):			Nearest Mile	post		Associated W	etland ID(s):
WI-AS-238.000			27.7			WASV050		
Survey Type: (check one)	⊠ Centerline	e □Re-R	Route	□Access Road		□Other:		
Physical Attributes	5							
Stream Classification: (check one)	☐ Ephemer	al ⊠Inter	mittent	□ Perennial				
Waterbody Type: (check one)	River 🗵 Str	eam 🗆 Dito	ch 🗆 C	Canal	er:			
OHWM Width:	OHWM Indica (check all that apply		⊠ Clear lin	ie □Shelvin	g	□Wrested vegetation	□Sco	uring □Water staining
Height: 1ft. N/A□	⊠Bent, vegetat	, matted, or missi ion	ing □Wrad	ck line □Litter ar debris	nd	□Abrupt plant community cha		characteristic change
Width of Waterbody - T Bank to Top of Bank:		of Waterbody - 7 of Slope:	Toe of Slope	Width of Waterbo Water Edge:	ody - W	ater Edge to	Depth of W (Approx.)	ater:
<u>4</u> ft.		<u>3</u> ft.		_ N/A□	<u>2.5</u> ft.		N/A⊠	<u>2-4 in</u> .
Sinuosity: (check one) ☐ Straight	(Approx.)	velocity: <u>0.25 f</u> ps		Bank height Right: Left:	<u>8 f</u> t. 8ft.			ight: 90 degrees Left: 90 degrees
Qualitative Attribu				-	<u> </u>			uug.coo
Water Appearance:	162							
(check one)	No water ⊠0	Clear □Turb	-		face um	□Algal [mats	□Other:	
Substrate: (check all that apply) % of Substrate:	Bedrock	ulder □ Cobbl %%	e ⊠ Grave		⊠ Silt/ c 20_%	lay □ Organio		% %
Width of Riparian Zone		•						
_ <u>200</u> ft. N/A□	(check all that Avg. DBH (approx.)	of Dominants:	⊠ Trees <u>14</u> in.		ings/Sh <u>2</u> in.	rubs:	⊠ Herbs <u>N/A</u> in.	
Dominant Bank Vegeta	` ' ' '							
Carex crinita, Carex bron	noides, Abies bals	samea						
Aquatic Habitats (ex: su	bmerged or emerged	d aquatic vegetation	n, overhanging	banks/roots, leaf pac	ks, large	submerged wood	, riffles, deep	pools):
Overhanging banks, leaf	packs, riffles, poo	ols						
Aquatic Organisms Ob	served (list):							
Gerridae (10+ observed)								
T&E Species Observed	(list):							
None								
Disturbances (ex: livesto		n waterbody, waste	discharge pipe	es):				
Culvert underneath acces	ss гоаа.							
Waterbody is: (check one)	⊠ Natural	□ Art	ificial, man-m	ade □ Manipu	ulated			
Stream Quality ^a : (check one)	⊠ High	□ Мо	derate	□ Low				

SASV013

^a High Quality: Natural channel, natural vegetation extends at least one or two active channel widths on each side; banks stable and protected by roots; water color is clear to tea-colored; no barriers to fish movement; many fish cover types available; diverse and stable aquatic habitat; no disturbance by livestock or man.

Moderate Quality: Altered channel evidenced by rip-rap; natural vegetation extends 1/3-1/2 of the active channel width on each side; filtering function or riparian vegetation only moderately compromised; banks moderately unstable; water color is cloudy, submerged objects covered with greenish film; moderate odor; minor barriers to fish movement; fair aquatic habitat; minimum disturbance by livestock or man.

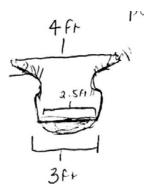
Low Quality: Channel is actively down cutting or widening; rip rap and channelization excessive; natural vegetation less than 1/3 of the active channel width on each side; lack of regeneration; filtering function severely compromised; banks unstable (eroding); water color is muddy and turbid; obvious pollutants (algal mats, surface scum, surface sheen); heavy odor; severe barriers to fish movement; little to no aquatic habitat; severe disturbance from livestock or man.

Notes:

Stream SASV013 is exhibiting low flow. A portion of WASV050f acts as a floodplain to the stream. There are no roots in the streambed, and there is a clear bed and bank, substrate sorting, and riffle/pool sequences. SASV013i is culverted for approximately 30ft. under existing gravel road. Stream widens to >10ft west of culvert and stream flow stops. Standing pools of water are present in western portion of stream. On western portion of stream there are deep downcuts with the left bank and right bank up to 8ft tall. Slope is 90% on each side, and grade control present with leaf packs.

At PEM opening there is an intermittent/perennial. Timber crosses stream for logging access. Banks up to 10ft wide with undercut banks. Western side flows through WASV054.





Linear Waterbody Point Photographs Line 5 Wetland Delineation September 28, 2019, Page 1 of 2



Photograph 1: SASV013, East, Upstream



Photograph 2: SASV013, West, Downstream

Linear Waterbody Point Photographs Line 5 Wetland Delineation September 28, 2019, Page 2 of 2



Photograph 3: SASV013, North, Across Stream

Survey Description	1								
Project Name:		Waterbody Nar	ne:		W	aterbody ID:			Date:
Line 5		Unnamed tributa	ary to Scott Ta	aylor Creek	S	ASV017e		1	0/2/2019
State:	County:		Company:		Crew I	Member Initials	: PI	hotos:	
Wisconsin	Ashland		VHB		DCR, (CDC	3	(US, DS	S, CS)
Tract Number(s):			Nearest Mile	post		Associated W	etland II	D(s):	
WI-AS-240.001			28.7			WASV056			
Survey Type: (check one)	□ Centerline	e □Re-R	Route	□Access Road		□Other:			
Physical Attributes	8								
Stream Classification: (check one)	⊠ Ephemer	al □Inter	mittent	□Perennial					
Waterbody Type: (check one)	River 🗵 Str	eam 🗆 Dito	ch 🗆 C	Canal	er:				
OHWM Width: ft.	OHWM Indica (check all that apply		☐ Clear lin	e □Shelvinç	g	□Wrested vegetation		couring	□Water staining
Height: ft. N/A⊠	□Bent vegetat	, matted, or missi ion	ing □Wrad	ck line □Litter ar debris	nd	□ Abrupt plant community cha		Soil char	acteristic change
Width of Waterbody - T Bank to Top of Bank:		of Waterbody - 7 of Slope:	Toe of Slope	Width of Waterbo	ody - W	ater Edge to	Depth of (Approx.)	f Water	
_ <u>5</u> ft.		<u>4</u> ft.		N/A⊠	ft.		N/A□		<u>2-3 in</u> .
Sinuosity: (check one) ☐Straight	Water (Approx.)	velocity:		Bank height Right: Left:	<u>3</u> ft.		Bank slo	ppe Right:	80 degrees
⊠Meanderir	ng N/A⊠			Loit.	<u>3</u> ft.			Lort	80 degrees
Qualitative Attribu	tes								
Water Appearance: (check one)	No water ⊠0	Clear □Turb	-		face um	□Algal [mats	□Other:		
Substrate: (check all that apply) % of Substrate:	Bedrock ⊠ Boo		e ⊠ Grave		⊠ Silt/ c 	elay □ Organio	c □ 0 —	ther: %	
Width of Riparian Zone >500ft.	(check all that	•	⊠ Trees 4 in.	•	ings/Sh 1_in.	nrubs:	⊠ Herbs	5	
N/A□	(approx.)		 ,,,		<u>-</u>		<u>11/74</u> 111.		
Dominant Bank Vegeta Fraxinus nigra, Abies bai		filix-femina							
Aquatic Habitats (ex: su	bmerged or emerged	d aquatic vegetation	n, overhanging	banks/roots, leaf pac	ks, large	submerged wood	, riffles, de	ep pools):
pools	ŭ ŭ	, ,	, 5 5	, .	, 0	Ü			,
Aquatic Organisms Ob	served (list):								
None									
T&E Species Observed	(list):								
None									
Disturbances (ex: livesto	ock access, manure i	n waterbody, waste	discharge pipe	es):					
Area has been logged									
Waterbody is: (check one)	⊠ Natural	□ Art	ificial, man-m	ade 🗆 Manipu	ulated				
Stream Quality ^a : (check one)	⊠ High	□ Mo	derate	□ Low					

SASV017e

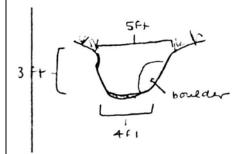
^a **High Quality:** Natural channel, natural vegetation extends at least one or two active channel widths on each side; banks stable and protected by roots; water color is clear to tea-colored; no barriers to fish movement; many fish cover types available; diverse and stable aquatic habitat; no disturbance by livestock or man.

Moderate Quality: Altered channel evidenced by rip-rap; natural vegetation extends 1/3-1/2 of the active channel width on each side; filtering function or riparian vegetation only moderately compromised; banks moderately unstable; water color is cloudy, submerged objects covered with greenish film; moderate odor; minor barriers to fish movement; fair aquatic habitat; minimum disturbance by livestock or man.

Low Quality: Channel is actively down cutting or widening; rip rap and channelization excessive; natural vegetation less than 1/3 of the active channel width on each side; lack of regeneration; filtering function severely compromised; banks unstable (eroding); water color is muddy and turbid; obvious pollutants (algal mats, surface scum, surface sheen); heavy odor; severe barriers to fish movement; little to no aquatic habitat; severe disturbance from livestock or man.

Notes:

Ephemeral stream did not have characteristics of OHWM; SASV017 originates in PFO portion of WASV056 and then runs approximately 30ft to a PFO/PEM wetland break where bed and bank is lost. Channel downcutting, substrate sorting, missing leaf litter in streambed and standing pools of water 2-3in deep observed in reach.





Linear Waterbody Point Photographs Line 5 Wetland Delineation October 2, 2019, Page 1 of 2



Photograph 1: SASV017e, East, Upstream



Photograph 2: SASV017e, West, Downstream

Linear Waterbody Point Photographs Line 5 Wetland Delineation October 2, 2019, Page 2 of 2



Photograph 3: SASV017e, North, Across Stream

Survey Description	์ า							
Project Name:		Waterbody Nan	ne:		W	/aterbody ID:		Date:
Line 5		Unnamed tributa	ary to Scott Ta	aylor Creek	S	ASV014i		9/30/2019
State:	County:	•	Company:		Crew I	Member Initials	: Photo	os:
Wisconsin	Ashland		VHB		DCR, (CDC	3 (US	, DS, CS)
Tract Number(s):			Nearest Mile	post		Associated W	etland ID(s):	
WI-AS-240.00			28.7			WASV051		
Survey Type: (check one)	⊠ Centerlin	e □Re-R	oute	□Access Road		□Other:		
Physical Attributes	3							
Stream Classification: (check one)	□ Ephemer	ral ⊠Interi	mittent	□Perennial				
Waterbody Type: (check one)	River ⊠ Str	ream 🗆 Dito	ch □ C	Canal	er:			
OHWM Width:	OHWM Indica (check all that apply		⊠ Clear lin	ne □Shelvin	g	□Wrested vegetation	⊠Scou	ring □Water staining
Height: 	⊠ Bent vegetat	, matted, or missi tion	ng □Wrad	ck line □Litter ar debris	nd	□Abrupt plant community cha		characteristic change
Width of Waterbody - T Bank to Top of Bank:		of Waterbody - 1 of Slope:	oe of Slope	Width of Waterb	ody - W	ater Edge to	Depth of Wa (Approx.)	ter:
<u>2</u> ft.		_ <u>1</u> ft.		N/A□	<u>1</u> ft.		N/A□	<u>0.5ft</u> .
Sinuosity:	Water	velocity:		Bank height			Bank slope	
(check one) ☐Straight	(Approx.)			Right:			Rig	ght:
		<u>0.5</u> fps		Left:	<u>2</u> ft.			<u>70</u> degrees .eft:
⊠Meanderin	g N/A□			Leit.	1.5 ft.			<u>70</u> degrees
Qualitative Attribut	tes							
Water Appearance:								
(check one)	No water ⊠0	Clear □Turbi	-		rface cum	□Algal [mats	□Other:	
	Bedrock ☐ Bo	ulder Cobbl	e 🗵 Grave	el 🗵 Sand 🛭	⊠ Silt/ c	lay 🗆 Organio	c 🗆 Other	
(check all that apply) % of Substrate:	%	%%	<u>30</u> %	<u>10</u> %	<u>60</u> %	%	9	6
Width of Riparian Zone	: Vegetative	e Layers:						
150ft	(check all that	of Dominants:	⊠ Trees	•	lings/Sh	nrubs:	⊠ Herbs	
N/A□	(approx.)	or Dominants.	<u>8</u> in.	_	<u>2 in.</u>		<u>N/A</u> in.	
Dominant Bank Vegeta	tion (list):							
Acer saccharum, Athyriu	m filix-femina, Qu	ercus rubra						
Aquatic Habitats (ex: su	bmerged or emerge	d aquatic vegetation	n, overhanging	banks/roots, leaf pag	cks, large	submerged wood	I, riffles, deep	
pools): Leaf packs								
Aquatic Organisms Ob	served (list):							
None								
T&E Species Observed	(list):							
None								
Disturbances (ex: livesto	ck access, manure i	in waterbody, waste	discharge pipe	es):				
None								
Waterbody is: (check one)	⊠ Natural	□ Art	ificial, man-m	ade □ Manip	ulated			
Stream Quality ^a : (check one)	☐ High	⊠ Mo	derate	□ Low				

SASV014i

^a **High Quality:** Natural channel, natural vegetation extends at least one or two active channel widths on each side; banks stable and protected by roots; water color is clear to tea-colored; no barriers to fish movement; many fish cover types available; diverse and stable aquatic habitat; no disturbance by livestock or man.

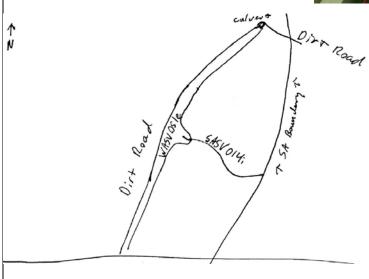
Moderate Quality: Altered channel evidenced by rip-rap; natural vegetation extends 1/3-1/2 of the active channel width on each side; filtering function or riparian vegetation only moderately compromised; banks moderately unstable; water color is cloudy, submerged objects covered with greenish film; moderate odor; minor barriers to fish movement; fair aquatic habitat; minimum disturbance by livestock or man.

Low Quality: Channel is actively down cutting or widening; rip rap and channelization excessive; natural vegetation less than 1/3 of the active channel width on each side; lack of regeneration; filtering function severely compromised; banks unstable (eroding); water color is muddy and turbid; obvious pollutants (algal mats, surface scum, surface sheen); heavy odor; severe barriers to fish movement; little to no aquatic habitat; severe disturbance from livestock or man.

Notes:

SASV014i is a moss lined intermittent stream originating outside of the study area and dissipating into WASV051. Leaf packs present in channel with some natural vegetation extending into stream bed, but not more than 1/3 of active channel width on each side.





Linear Waterbody Point Photographs Line 5 Wetland Delineation September 30, 2019, Page 1 of 2



Photograph 1: SASV014i, East, Upstream



Photograph 2: SASV014i, West, Downstream

Linear Waterbody Point Photographs Line 5 Wetland Delineation September 30, 2019, Page 2 of 2



Photograph 3: SASV014i, North, Across Stream

Linear Waterbody Data Sheet

Survey Description	n										
Project Name:		Waterbo	body Name:					Vaterbody ID:			Date:
Line 5		Unnamed tributary to Scott Taylor Creek						ASV018i		•	10/3/2019
State:	County:		mpany:			Crew I	Member Initials	: Pl	hotos:		
Wisconsin	Ashland		VHB DCR					CDC	3	(US, D	S, CS)
Tract Number(s):			Ne	arest Mile	post			Associated W	etland II	D(s):	
WI-AS-240.000, WI-AS-2	240.001		28.	7				WASV057			
Survey Type: (check one)	⊠ Cente	erline	□Re-Rou	te	□Ac	cess Road		□Other:			
Physical Attributes	\$										
Stream Classification:	□ Ephe	meral	⊠Intermitt	ent	ПР	erennial					
,		inorai	Amemia	.on		, crimiai					
Waterbody Type: (check one)	River 🗵	Stream	☐ Ditch		Canal	☐ Othe	er:				
OHWM	OHWM Inc										
Width: 1_ft.	(check all that	tapply)	<i>'</i>)		☐ Clear line on bank		g	□Wrested vegetation	⊠S	Scouring	g □Water staining
Height:		Bent, matted, o			ack line □Litter and debris		nd	□ Abrupt plant community cha		⊠Soil characteristic c	
N/A 🗆								,			
Width of Waterbody - T Bank to Top of Bank:		dth of Waterb Toe of Slope:		of Slope	Width	of Waterbo	ody - W	ater Edge to	Depth of (Approx.)	t Water	:
10 ft.			1 ft.				1 ft.				0.5 ft.
		-	<u> </u>		N/A□				N/A□		
Sinuosity: (check one)		nter velocity:			Bank I	•			Bank slo	-	
□Straight			1 fpg	fno		Right: 2_ff				Right: <u>45</u> degrees Left:	
		_	<u>1</u> fps	tps							
⊠Meanderir	ng N/A	\ □					<u>2</u> ft.				45 degrees
Qualitative Attribu	tes										
Water Appearance: (check one)	No water	⊠Clear	□Turbid	□Sh	een ırface	□Sui	rface	□Algal mats	□Other:		
Substrate:	Bedrock	Boulder 🗵	Cobble	⊠ Grav			□ Silt/ c		<u> </u>	ther:	
(check all that apply)	Deditock 🗆			△ Glavi	5 1	a Saliu L		, ,	t ⊔0		
% of Substrate:	%	%	<u>60</u> %	<u>30</u> %	' –	<u>10</u> %	%	%		%	
Width of Riparian Zone		ative Layers:									
>100ft.	li .	ll that apply) DBH of Domir	ante:	⊠ Trees	:		lings/Sh	rubs:	⊠ Herbs	5	
N/A□	(approx.)		iaints.	<u>6</u> in.		_	<u>1</u> in.		<u>N/A</u> in.		
Dominant Bank Vegeta	tion (list):										
Carex crinita, Fraxinus n	igra, Rumex c	rispus, Scirpu	s hattorian	nus							
Aquatic Habitats (ex: su	ibmerged or eme	erged aquatic ve	egetation, o	verhanging	banks/rc	ots, leaf pac	ks, large	submerged wood	l, riffles, de	eep pool	s):
Submerged wood (loggir	ng debris)										
Aquatic Organisms Ob	served (list):										
None											
T&E Species Observed	(list):										
None											
Disturbances (ex: livesto	ock access, man	ure in waterbod	y, waste dis	charge pipe	es):						
Logging debris, stream ru	itted.										
Waterbody is: (check one)	☐ Natur	ral	☐ Artifici	al, man-m	ade	⊠ Manipı	ulated				
Stream Quality ^a : (check one)	☐ High		⊠ Moder	ate		□ Low					

SASV018i

^a **High Quality:** Natural channel, natural vegetation extends at least one or two active channel widths on each side; banks stable and protected by roots; water color is clear to tea-colored; no barriers to fish movement; many fish cover types available; diverse and stable aquatic habitat; no disturbance by livestock or man.

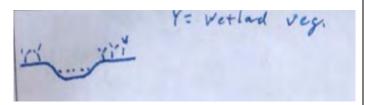
Moderate Quality: Altered channel evidenced by rip-rap; natural vegetation extends 1/3-1/2 of the active channel width on each side; filtering function or riparian vegetation only moderately compromised; banks moderately unstable; water color is cloudy, submerged objects covered with greenish film; moderate odor; minor barriers to fish movement; fair aquatic habitat; minimum disturbance by livestock or man.

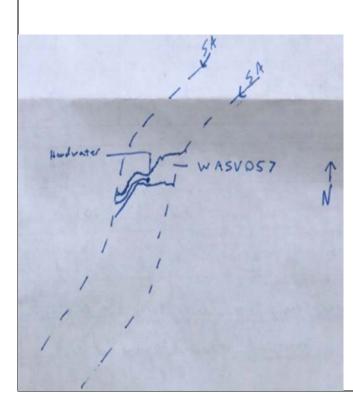
Low Quality: Channel is actively down cutting or widening; rip rap and channelization excessive; natural vegetation less than 1/3 of the active channel width on each side; lack of regeneration; filtering function severely compromised; banks unstable (eroding); water color is muddy and turbid; obvious pollutants (algal mats, surface scum, surface sheen); heavy odor; severe barriers to fish movement; little to no aquatic habitat; severe disturbance from livestock or man.

Notes:

SASV018i originates from WASV057 and flows southwestward off-site. Stream is experiencing significant disturbance from logging activities, including sedimentation into stream and excessive woody debris filling stream channel.

Waterbody Sketch (Include north arrow, centerline, distance from centerline, data point location, survey boundary, and IDs of associated features)







Linear Waterbody Point Photographs Line 5 Wetland Delineation October 3, 2019, Page 1 of 2



Photograph 1: SASV018i, East, Upstream



Photograph 2: SASV018i, West, Downstream

Linear Waterbody Point Photographs Line 5 Wetland Delineation October 3, 2019, Page 2 of 2



Photograph 3: SASV018i, North, Across Stream

APPENDIX F

Waterbody Data Sheets
Part 19 of 24

Waterbody Data Sheet

vaterbody bata	a Silect												
Description													
Project Name:						Date:			Waterbod	y Survey ID:			
Line 5 Relocation Pro	ject					2019-09-06			sasa007e				
State:		County/I	Parish:			USGS Waterbody Name:							
WI		Ashland				UNT to Geh	man Creek						
Company:		Crew Me	ember Ini	tials:		Latitude:			Longitude):			
Enbridge	· ·					46.363778			-90.593931				
Survey Type: (check one)	✓ Centerl	ine	☐ Re-Ro	ute		Access Road	□Facility	□Other					
Waterbody Type: (check one)	☐ River		☐ Strean	n	V	Ditch	☐ Swale	☐ Canal]	☐ Other			
Water Appearance: (check one)	✓ No Wat	No Water □ Clear □ Tu				Turbid	☐Sheen on Surface	e Scum	□Algal Mats	□Other			
Existing Condition ^a : (check one)	☐ Highly	Function	al Stream	ı 🗆 N	/loderately	y Functional S		Functionally	Impaired S	tream			
Feature Description: (check one)	☐ Natural		Artificia	al, man-m	ade 🗆 I	Manipulated							
Flow Regime: (check one)	☑ Ephem	eral	☐ Interm	ittent		Perennial	☐ Connection	ting					
Sinuosity within Survey Corridor: (check one)	☑ Straigh	t	☐ Meand	dering									
Roadside ditch domin	ated by se	nsitive fei	rn.										
Measurements													
Depth of Water:	ft.	N/A 🗹	Unknov	wn 🗆 🛮 W	ater Edge	to Water Ed	ge: ft.	N/A 🗹	OHWM Wi	idth:1	ft.		
OHWM Indicator: (check all that apply)	□ CI	ear line o	n bank	□Shelv	/ing	□Wrested v	egetation	□Scouring		□Water	staining		
	miss	nt, matte		□Wrac	k line	□Litter and	debris	☑ Abrupt plan change	t communit	ty □Soil ch change	naracteristic		
Dominant Substrate: (check all that apply)	□ Ве	edrock	□ Во	ulder	☐ Cobb	le 🗆 G	Gravel	坚 Sand	☐ Silt/ c	clay 🗆	Organic		
Observations													
Riparian Zone Preser (check one)	nt: 🗆 Ye	es		No									
Vegetation Layers: (check all that apply)	□ Tr	ees		Saplings/S	Shrubs	✓ Herbs							
Dominant Bank Vege Onoclea sensibilis, Sy	etation (list mphyotrich): num lance	eolatum, l	Phalaris a	rundinace	ea.							
Aquatic Habitats (ex: None.	submerged or	emerged aq	uatic vegeta	tion, overhan	iging banks/ro	oots, leaf packs, la	rge submerged v	ood, riffles, deep po	ools, etc.):				
Aquatic Organisms (None.	Observed ((list):											
Disturbances (ex: live Roadside ditch.	stock acces	s, manure	in waterbo	dy, waste d	ischarge pi	ipes):							
Observation Notes: Currently dry.													



sasa007e_E (downstream)



sasa007e_N (across)



sasa007e_W (upstream)

Waterbody Data Sheet

Waterbody Data C	лесс												
Description													
Project Name:						Date:	Date:			Waterbody Survey ID:			
Line 5 Relocation Project						2019-09-06			sasa006e				
State:		County/	Parish:			USGS Waterbody Name:							
WI		Ashland				UNT to Gehrman Creek							
Company:		Crew Me	ember Ini	tials:		Latitude:			Longitude:				
Enbridge`	NTT/DGL				46.365087			-90.591332					
Survey Type:	Centerl	ine	☐ Re-Ro	ute		Access Road	□Facility	□Other					
Waterbody Type:	River		☐ Stream	n		Ditch	☐ Swale	☐ Canal		Other			
Water Appearance: 🗹	e: ☑ No Water ☐ Clear ☐ T					Γurbid	Algal Mats □Other						
Existing Condition ^a :	Highly	Function	al Stream	□ N	loderately	y Functional S	Surface tream	Functionally	Impaired Stre	am			
Feature Description:	Natural		✓ Artificia	al, man-ma	ade 🗆 l	Manipulated							
Flow Regime: (check one)	Ephem	eral	☐ Interm	ittent		Perennial	☐ Connection Connection	ting					
Sinuosity within Survey Corridor: (check one)	Straigh	t	☐ Meano	dering									
Roadside ditch located at	ajacent	ю а тар	ole passwo	ood lorest.									
Measurements													
Depth of Water:f	t.	N/A🗹	Unknov	wn 🗆 Wa	ater Edge	e to Water Ed	ge: ft.	N/A 🗹	OHWM Widt	h: <u>1</u> ft.			
OHWM Indicator: (check all that apply)	□ CI	ear line o	on bank	□Shelv	ring	□Wrested v	egetation	Scouring		□Water staining			
(onoon all trac apply)		nt, matte		□Wracl	k line	□Litter and o	debris	☑ Abrupt plan change	t community	☐Soil characteristic change			
Dominant Substrate: (check all that apply)	□ Ве	drock	□ Во	ulder	☐ Cobb	le 🗆 G	Gravel	坚 Sand	⊻ Silt/ clay	y □ Organic			
Observations													
Riparian Zone Present: (check one)	□ Ye	es	<u> </u>	No									
Vegetation Layers: (check all that apply)	□ Tr	ees		Saplings/S	Shrubs	✓ Herbs							
Dominant Bank Vegetati Onoclea sensiblis, Phalai	ion (list): dinacea,	Scirpus c	yperinus, A	Agrostis g	gigantea.							
Aquatic Habitats (ex: subr None.	nerged or	emerged ac	quatic vegeta	tion, overhan	ging banks/ro	oots, leaf packs, la	rge submerged w	vood, riffles, deep po	ools, etc.):				
Aquatic Organisms Obs None.	erved (list):											
Disturbances (ex: livestoc Located within a roadside		s, manure	in waterboo	dy, waste di	ischarge pi	ipes):							
Observation Notes: No surface water current	ly prese	nt.											



sasa006e_N (upstream)



sasa006e_S (downstream)



sasa006e_W (across)

Waterbody Data Sheet

Waterbody Data C	лес											
Description												
Project Name:						Date:	Date:			Waterbody Survey ID:		
Line 5 Relocation Project						2019-09-06			sasa005e			
State:		County/	Parish:			USGS Waterbody Name:						
WI		Ashland				UNT to Geh	rman Creek					
Company:		Crew Me	ember Init	tials:		Latitude:			Longitude:			
Enbridge					46.365124			-90.591167				
Survey Type:	Centerl	ine	☐ Re-Ro	ute		Access Road	□Facility	□Other				
,	River		☐ Stream	า	V	Ditch	☐ Swale	☐ Canal		Other		
Water Appearance: 🗹	: ☑ No Water ☐ Clear ☐ T					urbid □Sheen on □Surface Scum □Algal Mats □C Surface						
Existing Condition ^a :	Highly	Function	al Stream	□ Мо	derately	y Functional S	tream [Functionally	Impaired Stre	am		
Feature Description:	Natural		Artificia	al, man-ma	de 🗆	Manipulated						
Flow Regime: (check one)	Ephem	eral	☐ Interm	ittent		Perennial	☐ Connection	ting				
Sinuosity within Survey Corridor: (check one)	Straigh	t	☐ Meand	dering								
The waterbody is a roads	side dilc	n that ru	ns under a	a poweriine	corridor							
Measurements												
Depth of Water:f	t.	N/A 🗹	Unknov	wn□ Wat	er Edge	e to Water Ed	ge: ft.	N/A 🗹	OHWM Widt	h: <u>1</u> ft.		
OHWM Indicator: (check all that apply)	□ CI	ear line o	on bank	□Shelvir	ng	□Wrested v	egetation	□Scouring		□Water staining		
(спеск ан шагарру)		nt, matte		□Wrack	line	□Litter and o	debris	☑ Abrupt plan change	t community	☐Soil characteristic change		
Dominant Substrate: (check all that apply)	□ Ве	edrock	□ Во	ulder [□ Cobb	le □ G	Gravel	☑ Sand	☑ Silt/ clay	y 🗆 Organic		
Observations												
Riparian Zone Present:	□ Ye	es	اکا	No								
Vegetation Layers: (check all that apply)	□ Tr	ees	V (Saplings/Sh	rubs	 Herbs						
Dominant Bank Vegetat Matteuccia struthiopteris,	ion (list Poa pr): atensis, :	Scirpus at	rovirens, So	olidago (gigantea.						
Aquatic Habitats (ex: subr None.			quatic vegetal	tion, overhangii	ng banks/r	oots, leaf packs, la	irge submerged w	vood, riffles, deep po	ools, etc.):			
Aquatic Organisms Obs None.	erved (list):										
Disturbances (ex: livestoc Located along a roadside	ck access and un	s, manure iderneath	in waterboo h a powerl	dy, waste dis ine corridor	charge pi	ipes):						
Observation Notes: No water currently preser	nt.											



sasa005e_N (upstream)



sasa005e_S (downstream)



sasa005e_W (across)